



# American Aviation

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*The News Magazine of Air Transportation*

April 1, 1948

## None Too Soon

**A**FTER MANY fits and starts over a six-months period, there is now a prospect that all of the vacancies on the Civil Aeronautics Board will be filled.

It is none too soon. Air transport, like every other phase of aviation, must get into high gear without delay to meet any contingency which the turbulent international situation may bring. And the airlines need rapid correction of their current financial difficulties.

*by*  
*W. W. P.*  
The new chairman, Mr. Joseph O'Connell, is unknown to aviation and aviation is something new to him. Mr. Harold A. Jones, who is to fill the Republican vacancy, has had some aviation background, but the problems he will face on the CAB are new to him, too.

There remains one vacancy when Harlee Branch, who was one of the Board's first members in 1938, retires within a few weeks. Aviation people generally are hopeful that Russell Adams, now director of the CAB economic bureau, will get the post. He has the proper background and reputation. It would be a fine tribute to the CAB staff to elevate Adams to a top position.

It has been easy to criticize the CAB for its many sins of omission and commission. The batting average has been less than excellent. Yet the task faced by the Board has been a thankless and grueling one. Within the past year the political and other outside pressures on the members have been enormous and, if for nothing else, we can be grateful that the Board has been able to resist most of these pressure onslaughts. At times the CAB has been inundated by telephone calls, letters and telegrams from special interests who have chosen this method of trying to intimidate a quasi-judicial body into partisan action.

Perhaps now with a few new members, the Board will take time to re-examine its position and policies, to study the industry for which it is largely responsible, to move with caution until the new members are conversant with current problems, and to study air transport's place in the national security preparations now under way.

We would recommend that the Board take time to read carefully the statesmanlike statement which C. R. Smith, chairman of the board of American

(Turn to page 6)



**Trans-Texas President**

Meinspring of Trans-Texas Airways is R. Earl McKaughan, president, who has combined hard work and enthusiasm in developing his 2,030-mile feeder operation. Although a pilot for more than two decades, at 38 he's one of the youngest top executives in the air transportation business. (See story on page 12.)

## *In This Issue*

**Feederlines Show Progress  
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**REFERENCE COPY**

MANAGEMENT

SALES

OPERATIONS

**Scientist, merchant, artist...**

*All fly for profit*



**Cecil Hagen**, Houston consulting geologist, flew his 4-place Bonanza 20 hours his first week of ownership. Covered "3,000 miles, which would have taken 3 times as long by other means of travel." The whole U. S. is now his operating territory. He personally watches various operations without hiring more men as in the past.



**Bonanza-owner H. C. Bowers**, retail furniture dealer of Salt Lake City, can now make all those buying trips he *should* have been making . . . and didn't. Has more time at the store, too. Increases out-of-town sales by flying customers to the home store. Bonanza travel pays . . . in many ways!

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**MORE AIRCRAFT LAND ON GOODYEAR**

**TIRES THAN ON ANY OTHER KIND**

## FORTNIGHTLY REVIEW

While traffic figures of the nation's feederlines are small alongside those of the big trunkline carriers, the regional operators are making good progress in developing traffic. Feederline passenger miles were up 200% in January this year, compared with same month a year ago, air cargo volume up 300% (Page 11)

Still undecided as to whether it will produce its proposed DC-9 as replacement for the DC-3, Douglas Aircraft Co. is ready to proceed should the airlines' financial situation improve sufficiently to assure a market. Type specifications for the DC-9 are published here for the first time. (Page 20)

Complicated Federal regulations which have been largely responsible for the slow progress of the national airport program are finally to get a long-due overhaul. (Page 29)

More than 13 months after hearings ended in the Air Freight Case, CAB examiners have issued their report recommending three-year all-cargo certificates for six operators. Three of the routes would be transcontinentals, and two north-south on a flexible area-to-area pattern. (Page 31)

Mid-Continent Airlines tells its employees how delays can be prevented, as part of its systemwide drive to improve passenger service. (Page 36)

### Little Chance for Air Parcel Post Bills

The abortive air parcel post bill introduced by Rep. Edward Rees (R., Kans.) is believed dead, although hearings on the measure were scheduled to be resumed. Strong opposition to enactment of the bill, which would provide air parcel post to only the larger cities under contract-bid procedures, came from Postmaster General Jesse M. Donaldson and Robert Ramspeck, executive v. p. of Air Transport Association. Even so-called friendly witnesses recommended major changes in the bill. There is now little prospect for any air parcel post legislation during the 80th Congress.

### Flood of Bills to Implement Air Policy

Some 30 bills, dealing with various recommendations made by the Congressional Aviation Policy Board, were expected to be introduced in Congress by April 1 or shortly thereafter. Rep. Carl Hinshaw (R., Calif.), vice chairman of the Board, indicated that one of the first would authorize creation of a joint Congressional Committee on Aviation Policy, which would make a biennial report to Congress on aviation matters. This would create jobs for some staff members who served the Board during its five months of study. Indications were that the President's Air Policy Commission report would become primarily a reference document, and that Congress would use almost entirely its own report as basic pattern for new legislation. Report of the President's Commission has never been submitted to Congress, hence has no official standing in the national legislature.

### House Cuts Air Mail Funds

Marked reductions from 1948 appropriations for both domestic and foreign air mail were included in the Treasury-Post Office Appropriation bill passed by the House of Representatives on Mar. 11. The Appropriations Committee pointed out, however, that no accurate estimate was available for amounts needed in fiscal 1949 and that the Post Office Department was authorized to come in with supplemental requests when needs are definitely determined. The House allowed \$32,000,000 for domestic air mail service in '49, compared with \$47,000,000 appropriated in '48, and \$19,500,000 for foreign air mail, compared with \$40,500,000. More

## AMERICAN AVIATION

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## FORTNIGHTLY REVIEW

(CONTINUED FROM PAGE 4)

than \$13,000,000 of currently available foreign air mail funds were reported being held in suspense pending action of the Civil Aeronautics Board.

### ATA Protests 'Lobbying' Designation

Despite the finding that not more than 2% of its time and funds are concerned with enactment or defeat of Federal legislation, the Air Transport Association has been under pressure from the Department of Justice to file quarterly reports with Congress under provisions of the so-called Lobbying Act. Last month, ATA directors yielded to Justice pressure and voted to comply, under protest, with requirements of the Act. While the ATA board unanimously accepted the opinion of its chief counsel, Stuart T. Tipton, that the association was not required to file such reports (since its principal activities do not involve influencing Federal legislation), the directors decided that it would be unwise public policy to become involved in possible litigation with the Justice Department. Compliance involves a big bookkeeping job. It will mean reporting all donations of member airlines amounting to more than \$500 during a quarterly period for so-called lobbying purposes. Further, ATA personnel concerned with legislation will be required to keep detailed records of their work. It is understood that the Aircraft Industries Association is considering the same subject.

### Top Priority for Air Force

While President Truman was calling on Congress for legislation to implement a temporary draft and universal military training, House Speaker Joseph W. Martin, Jr., in mid-March went on record that top priority in Congress would be given to building "the world's strongest air force." Martin told a news conference that the GOP economy ax would be kept clear of essential funds for the military. Of the three armed services, he said, "top priority will be given the Air Force." The House leader indicated that it might be necessary to spend more than the \$11,025,021,298 which President Truman suggested for national defense.

### Names in the News:

**Rear Admiral Lawrence B. Richardson**, USN (Ret.), on Mar. 24 was elected president of Fairchild Engine and Airplane Corp. At same time, **J. Carlton Ward, Jr.**, president of the corporation since 1940, was elected chairman of the board, in which post he will continue as the firm's chief executive officer. Adm. Richardson was formerly v.p. and executive assistant to the president of Curtiss-Wright Corp. . . .

Four former ATC and NATS officers last month were on temporary duty helping to effect the merger of these two transport organizations into Military Air Transport Service: **Paul Richter**, president of TACA Airways and former NATS captain; **Grant Mason**, former CAB member who was ATC's assistant chief of staff-planes; **H. O. Kristofferson**, director of operations, PAA's Pacific-Alaska Division and former ATC assistant chief of staff-operations; **S. Paul Johnston**, director of Institute of the Aeronautical Sciences and former NATS captain . . . **H. Don Reynolds**, chief, litigation and enforcement section of CAB's general counsel office, has resigned to join the legal staff of Pan American Airways in New York. He has headed CAB's litigation and enforcement since its inception in 1946 . . . **Col. William Westlake** has been named executive director of Congressional Aviation Policy Board following resignation of **Rear Admiral H. B. Miller**, who is planning to take a post in private aviation. Westlake was assistant

executive director of the Board and consultant to its subcommittee on transportation.

### Notes in the News:

**Lockheed** last month reported that Constellations have logged 2,000,000,000 passenger miles since entering commercial service in February, 1946. Additional passenger miles are being recorded at rate of 125,000,000 per month by 123 Connies now flying. . . . **Registered civil aircraft** of U. S. increased by 13,819 during 1947. CAA figures show 94,821 on Jan. 1, 1948, compared with 81,002 on same date a year ago. California has most with 10,221, Vermont fewest with 187 . . . Navy is testing a new **five-place Sikorsky helicopter** for utility, rescue, and observation work. Designated the XHJS-1, the craft has top speed of 110 mph, service ceiling of 19,000. It is powered by a 500 hp Continental R-975-34. . . . Three helicopters and their performance records will be up for sale April 2 when properties of bankrupt **Helicopter Air Transport, Inc.**, will be sold at auction at Central Airport, Camden, N. J. Offering includes one Sikorsky S-51, one Bell 47-B, and one Platt-Le Page. . . . **Birmingham's National Air Carnival** will not be held this year because of "circumstances beyond the control of the Aero Club," which has sponsored the show in the past.

### International

#### Irish Shelve Trans-Atlantic Plans

Trans-Atlantic services proposed by Irish Air Lines (Aerlinne Eireann) and possibly all other Irish air services appeared shelved last month and may be closed out indefinitely. Newspaper reports from Dublin quoted Patrick McGilligan, Minister of Finance, as stating the trans-Atlantic service "will not go into operation if I can help it". Soon as it came into power, the new coalition government has indicated opposition to air services unless they can pay their way. Government-owned Irish Air Lines has five new Constellations, two of which have been used on the Dublin-London run. The company had earlier announced plans to inaugurate service to New York on March 17. It is known that British Overseas Airways would like to acquire as many of the Connies as the Irish line will sell.

#### Brackley Named BSAA Chief Executive

Air Commodore H. G. Brackley, who has been assistant to the chairman of British Overseas Airways Corp., has been appointed chief executive of British South American Airways. He succeeds Air Vice-Marshall Donald Bennett, who was recently dismissed following clash of views with Ministry of Civil Aviation.

#### 69 Planes in Unified Scandinavian Fleet

When the three Scandinavian airlines (ABA—Swedish, DDL—Danish, DNL—Norwegian) begin operating this month as one service under the flag of Scandinavian Airlines System, they will have a combined fleet of 69 aircraft as follows: 9 DC-4's, 48 DC-3's, 4 Vickers Vikings, 2 Sandringham flying boats, 1 C-54, and 5 JU-52's. On order are 17 DC-6's and 4 Stratocruisers, at least one more flying boat, and probably some Swedish Scandia transports. In the past, SAS has been an intercontinental service to North and South America, while the various national companies operated individually throughout Europe. Under the combination plan, SAS will operate feederlines from Oslo and Stockholm to Copenhagen, from where the European continental routes will start.

## EDITORIAL

(CONTINUED FROM PAGE 1)

Airlines, Inc., made to the President's Air Policy Commission last fall with regard to air transportation and air power. With this as a background we suggest the Board should examine and reorganize its policies in the light of air power requirements.

It is our own feeling that the Board has had much too narrow a concept of its responsibilities to the nation. It has been concerned too much with day-to-day regulation of the airlines and not enough about the broader aspects of air transport as one of the three basic elements of national air power. The Board could not do better than to raise its sights to a broader horizon. Unless this is done, the Board will find itself in the same position it was in at the start of the last war—unprepared, uninformed, and occupying a back seat.

We also urge the Board to spend a little time strengthening its staff and the staff policies. Endless hours, days and months are being wasted during these times of urgency on trivial details. Conscientious and honest as are the staff men, they are dragging their feet and consuming time of busy executives needlessly over minutiae. We are thinking particularly of the accounting and rates division under Warner H. Hord, which is especially sluggish, and of tariffs and service division under B. R. Gillespie where skirmishes are won and wars lost over minor matters such as misplaced commas. We are thinking of the talents of Frank Crozier, chief of the analyses division, who as one of the best staff members, should be further utilized on the broader picture of air transport's requirements for national air power.

The air transport industry is sick, but the Board can remedy the ills if it acts in a businesslike way with vision and know-how. The Board should overcome its timidity about asking for the necessary financial aids to make the industry strong. It is too cringing, too apologetic. As Carleton Putnam, president of Chicago & Southern Air Lines told the President's Air Policy Commission last fall, "I say without fear of contradiction that the airline industry has developed faster, with less aid, and had paid the government's investment out more rapidly, than any other form of transportation of the country or the world." The Board must get over its hang-dog attitude, stand on its feet, and provide the positive leadership which everyone expects of it.

And while the Board is reviewing its policies, let it also read the recent writings and speeches of Howard C. Westwood, prominent Washington attorney. "I would suggest," he says, "that if our economic system encounters a depression, or even a recession, within the next two or three years, there is very little chance that the airlines as we know them will survive." These are strong words. The Board needs to heed them without delay.

The new members are not taking on easy tasks. What the Board does within the next year will largely decide the fate of the air transport industry in this country.

## The Salary Problem

THERE IS a mistaken idea that only the five members of the CAB and the CAA Administrator receive \$10,000 per year. While the maximum salary limit of \$10,000 per year has remained for these important positions, the salary scale of subordinate positions has been constantly rising.

In the CAB there are four men besides the five members who are on a level of either \$9,975 or \$10,000 annually.

In the CAA one finds a steady climb in salaries during the past few years. There are no fewer than 27 CAA positions paying either \$9,975 or \$10,000 annually, while there are a total of 52 positions paying \$8,175 or better.

It is a great penalty on civilians willing to perform public service to have to work under present conditions. The top CAB positions and the CAA Administrator, at least, should be moved up to \$15,000 per year. Government salaries as a whole have tended to keep pace with rising costs, but the retention of the top limit on appointive positions is a disgrace. We hope Congress will rectify this matter at the earliest possible moment.

## A Bit of History

WITHOUT fanfare a few months ago, British Overseas Airways Corporation retired three Boeing 314 flying boats, the Bristol, the Berwick, and the Bangor. The operating and retirement record of this fleet is probably without parallel. For six years these flying boats made 596 crossings of the Atlantic and many hundreds of flights to Bermuda, without death or injury to any passenger or crew member. The boats flew over four and a half million miles. It may well be the first time in aviation history that an airline retired the original fleet it had acquired without a single operating mishap. Considering the fact that the boats operated across the Atlantic in wartime, the record is all the more significant.

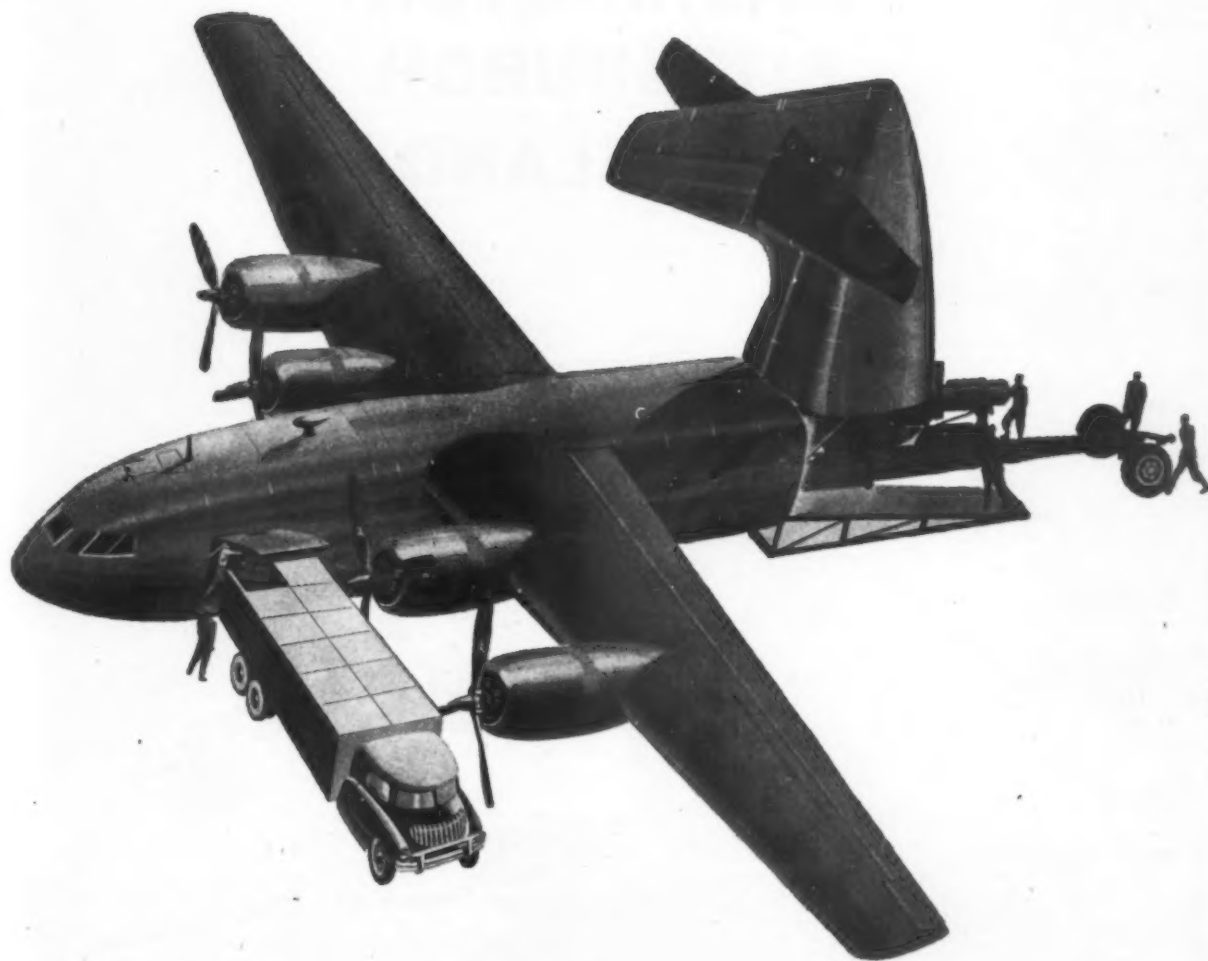
WAYNE W. PARRISH.

"Twenty-five years ago the airlines of the world, so far as one could ascertain, flew 19,000,000 passenger miles. Just before the war that figure had become 330,000,000 passenger miles, not counting the American domestic system, which was then flying nearly 500,000,000 passenger miles; so that we can say that in 1939 the total passenger mileage the world over had reached a figure of 900,000,000. Today that world total is much nearer 10,000,000,000. It is quite possible in my lifetime I shall see the Director-General of IATA reporting to the airlines of the world, not a passenger mileage of 10 thousand million, but 10 million million."—Sir William Hill-dred, Director-General, International Air Transport Association.


AMERICAN AVIATION

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CLEVELAND**



# NORTHWEST *Orient* AIRLINES

## BACKGROUND & TRENDS

**Cargo Test Flying:** When American Airlines put its first two Convair-Liners into coast-to-coast all-cargo service last week, it marked the first time any airline has tested new aircraft in this manner. The cargo flying will continue for five weeks for total of 100,000 miles before the Convairs are put into passenger operations late this spring. Continental Air Lines was considering using one of its Convairs in cargo service for two months before placing it on passenger runs. This procedure is in keeping with recommendation of President's Air Policy Commission that new transport types be operated regularly on non-passenger schedules first.

**Air Power:** America's air power would be brought close to the 20,500-plane strength recommended by the President's Air Policy Commission, under blueprint recently approved by Joint Chiefs of Staff. The plan would double the plane potential of the Air Force, vastly increase size of Navy's air arm.

**Price War Weapon:** CAB enforcement agents have been empowered to buy air transportation tickets at illegal rates and use such tickets as evidence of violations of the Civil Aeronautics Act. This ruling, by the comptroller general of the U. S., is regarded as providing an effective weapon to combat illegal price-cutting in the non-certificated field. Previously, CAB hesitated to use its appropriated funds for such purposes.

**Backlog Shrinking:** Although still months behind in its handling of many cases, CAB has been making progress in shrinking its backlog. Between Jan. 1 and mid-March it disposed of 182 separate applications, reducing its docket from 1,127 to 945 pending cases. In January 46 applications were disposed of, in February 132. Two decisions—the Arizona-New Mexico Case and the Middle Atlantic Case—eliminated 83 applications between them. As sign of the times, 19 airline applications were dismissed in late February for want of prosecution, and several more on the books for a number of years are soon to be dismissed for same reason.

**Steamroller Tactics:** Seldom has Civil Aeronautics Board been subjected to such heavy pressure to get quick favorable action as that coming from surface-dominated and owned freight forwarders seeking exemption for freight forwarding as indirect air carriers. A campaign of rare intensity was reported operating through Congress last month, with literally hundreds of telephone calls being made from The Hill to CAB members.

**No Hindrance:** Early reports on international air cargo indicate that business has increased since cancellation of contracts with Railway Express Agency became effective Mar. 1. Both TWA and Pan American reported gains, as each carrier expanded its own sales organization. The REA international contracts were cancelled because REA would not accede to requirements established by IATA.

**Going Up:** Air freight rates are on the way up, for both certificated and noncertificated carriers. Evidence in recent Air Freight Rate Case indicated that present tariffs are well below cost of rendering service, and CAB's decision, expected within a month, is almost certain to bring a hike.

**Still Lacking:** At La Guardia's international terminal, the most important in the world, only three airlines have arrival and departure signs: American Overseas, Air France, and Pan American, although PAA handles BOAC and Sabena planes and these are listed.

**Financial Shift:** The sharp change that has taken place in domestic air transport industry's capital structure within past three years was pointed out recently by Howard Westwood, well-known Washington aviation attorney. In 1945, 90% of total net investment was represented by common stock, 7% by preferred stock, and only 3% by long term debt. By 1947, common stock had fallen to less than half the total investment or only 41%, preferred stock had risen to 17%, and long term debt had soared to 42%. This means, he states, that the capital structure no longer has "the give, or absorbing power, of equity financing" and that "generations of railroad history testify most eloquently to the dangers in this condition."

**Busy Connies:** A few years ago it would have been considered impossible to operate as many long schedules, as planned by British Overseas Airways Corp. in its new summer timetable, with only six airplanes. Beginning April 25, BOAC plans to operate no less than nine trans-Atlantic round-trips weekly and seven round-trip schedules U. S.-Bermuda—using only half a dozen Constellations.

**Bartows Work:** Those Bartow high intensity runway lights are living up to their reputation. In one of the last of the season's snowstorms, operations at Wold Chamberlain Airport, Minneapolis, were routine and normal during a blinding snowfall. The Bartows were first installed at Minneapolis and have improved operations immeasurably in bad weather.

**Aircraft Lease:** In its effort to get new transports, Capital Airlines will try to work out arrangement under which the manufacturer, when selected, will retain ownership of craft and lease them to the airline. Other courses open to Capital would be new equity financing or bank loans, if they could be worked out.

**Mail Upswing:** International tensions which reached a postwar peak last month have brought sharp upswing in air mail volume, especially to Middle Europe. More than 1,000,000 air mail letters were delivered overseas by Pan American Airways in week beginning March 7, an increase of 100% over a year ago and one-third more than in preceding week.

**Gift Tags:** Every airline from time to time gives out little gifts to its friends—everything from pencils to note pads. Mid-Continent Airlines has a special gift, however, that really shines. It's a metal tag and strap for baggage. Name of the recipient is engraved on one side and MCA's insignia on the other. Very useful.

**Private Convair:** One order for a Convair-Liner, as yet unannounced, has been placed by Harold L. Vanderbilt, of New York City, for use as a family private transport. Vanderbilt now has one executive model DC-3.

**ATA Air Mail:** All first class mail matter sent out by Air Transport Association in future will be dispatched by air mail. ATA President Emory S. Land has urged all airlines to adopt a similar course, if they have not already done so.

**Too Many Changes:** Because of numerous schedule changes resulting from return of its DC-6's and consequent shifting of DC-4's and DC-3's, American Airlines has decided to discontinue the mailing of timetables until things settle down. For up-to-date flight schedule information, customers are being urged to call the nearest AA office or a travel agent.



## Where the wind bares its secrets

This picture was taken in the test section of Boeing's wind tunnel—fastest privately owned, large-dimension wind tunnel in the world. It is an integral part of Boeing's experimental facilities—the most extensive maintained by any aircraft manufacturer.

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**BOEING**  
STRATOCRUISER

## Feederlines Show Progress In Developing Air Traffic

By KEITH SAUNDERS

Traffic figures of the nation's feeder airlines still look small alongside those of the big trunkline carriers, but the feeders got off to a promising start last year—first full calendar year of operating experience for most of them—and did very well in the first month of 1948.

It was a little early to determine just how substantial was the demand for air service linking smaller communities with the trade centers of their respective regions and with trunkline route points, but the record showed indications that the feeders were learning something about developing traffic.

In January of this year, for example, when the trunklines were showing only slight passenger traffic gains, if any at all, over January, 1947, the feederlines registered impressive gains. Leaving aside Challenger, Florida and Trans-Texas Airways, which were not flying passengers in January, 1947, the record of the feeders for this January reflected a gain of better than 200% over that of the same month last year. And cargo traffic was up more than 300%.

Figures compiled from official company reports filed with the Civil Aeronautics Board showed that eight feederlines, one of which operated only eight months and another less than two, flew 235,584 revenue passengers an aggregate of 46,409,000 revenue passenger miles during last year. This volume of passenger traffic would have been regarded as insignificant by all but two or three of the major domestic trunkline carriers, but for small airlines serving comparatively small communities in an experimental type of service it looked like a good start.

What looked encouraging to the feeder operators was the way passenger traffic figures rose during the year from about 32,800 passengers and 4.7 million revenue passenger miles in the first quarter to more than 64,000 passengers and some 13 million revenue passenger miles in the last quarter. Even without traffic figures for Challenger, which started operating last May 3, and Trans-Texas Airways, which started serving a few route points in late fall, the fourth-quarter figures were up about 150% over the first quarter. The trunklines had only about a 2% differential in the same quarters.

**Peak in September.** Monthly average for the feeders was close to 20,000 passengers and a little under 4.0 million revenue passenger miles. Peak traffic

### Feederline Traffic

Carrier	Rev. Pass. Miles		Cargo Ton Miles	
	1948	1947	1948	1947
Challenger <sup>1</sup>	295	...	3,525	...
Empire	182	108	1,529	1,037
Florida <sup>2</sup>	87	...	221	...
Monarch	356	74	5,641	127
Pioneer	1,240	443	4,418	2,027
Southwest	884	298	4,733	614
Trans-Texas <sup>3</sup>	166	...	197	...
West Coast	318	77	568	110
<b>TOTALS</b>	<b>3,528</b>	<b>1,000</b>	<b>20,832</b>	<b>3,915</b>

<sup>1</sup> Started operating in May, 1947.

<sup>2</sup> Was carrying mail only in Jan., 1947.

<sup>3</sup> Started operating in Oct., 1947.

month was September, when 31,796 passengers flew 6,315,000 revenue passenger miles.

With regard to passenger load factors, an important key to profitable airline operations, the feeders still had a long way to go. Average load factor for the year for all of them was 29.9%, as compared to a 65.7% average for the domestic trunklines. Best load factor of the year was recorded in August—36.5%—and five other months were above 30%.

Tops in number of passengers was Southwest Airways, which reported 83,468 passengers, 14.9 million revenue passenger miles and a 41.6% load factor for the year. Pioneer, first of the feeders to be certificated, flew the greatest number of revenue passenger miles—16.5 millions—carried the second largest number of passengers—62,698—and had the second highest load factor—32.2%.

The feeders reported a total of 4,766,-

477 ton miles of revenue traffic in 1947, of which mail accounted for 133,782 ton miles, express for 89,443 ton miles, and freight for 65,722 ton miles. The 8,316,473 revenue plane-miles flown comprised 91.6% of total scheduled miles, and the ton miles of revenue traffic flown comprised 30.7% of total available ton miles flown.

Before they could hope to make much of a showing financially, even with substantial CAB help in the form of mail pay, it was obvious the feederlines would have to increase their passenger load factors, build up the percent of available ton miles used, and boost the percent of scheduled miles completed. But, on the basis of last year's record, they appeared to be on their way trafficwise, and most of them had another couple of years left under their three-year temporary certificates to make a better showing.

One reason seen for the low load factors of the feederlines was the fact that several of them, such as Trans-Texas (see page 12), deemed it more important to go ahead and start operations than to wait until they could build up an effective sales organization and program. Having inaugurated service over at least parts of their routes, and having licked some of their operational problems, they now are able to concentrate more on developing traffic, and should show results in this field during 1948.

Another hindering factor has been the fact that airport inadequacies have prevented the feeders from serving a number of towns to which they are certificated. This has made their route patterns spotty and has caused them to have to fly over towns with good traffic-generating possibilities.

Meanwhile, some 125 communities which had never before had any regularly scheduled air service were being served by at least a couple of schedules daily, and a good many others were in line for air service as soon as they could overcome airport inadequacies.

### Feeder Airline Traffic for 1947

	Revenue Pass.	Rev. Pass. Miles	Pass. Load Factors	Mail Ton-Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic
Jan. ....	4,863	1,000,000	22.1%	4,516	1,882	12	89,103
Feb. ....	7,086	1,418,000	23.5%	5,726	2,612	219	138,378
Mar. ....	11,973	2,329,000	27.9%	15,742	9,051	3,996	242,621
Apr. ....	16,051	3,129,000	32.9%	8,948	6,283	608	381,973
May ....	19,912	3,813,000	32.7%	9,940	8,624	829	449,961
June ....	21,164	3,941,000	30.1%	10,297	9,050	1,107	387,544
July ....	26,485	5,137,000	33.4%	12,593	8,872	7,063	511,157
Aug. ....	31,785	6,199,000	36.5%	12,824	10,315	6,618	613,848
Sept. ....	31,796	6,315,000	35.8%	13,060	9,414	11,518	628,589
Oct. ....	26,174	5,201,000	28.8%	13,010	8,476	11,627	518,139
Nov. ....	19,072	3,828,000	23.8%	7,594	6,309	10,969	254,104
Dec. ....	19,213	4,099,000	22.7%	16,555	8,555	11,176	419,802
<b>Year</b> .....	<b>235,584</b>	<b>46,409,000</b>	<b>29.9%</b>	<b>133,782</b>	<b>89,443</b>	<b>65,722</b>	<b>4,766,477</b>

## Work Plus Enthusiasm:

## Trans-Texas Moves Ahead

By WAYNE W. PARRISH

It doesn't take long to become a fan for Trans-Texas Airways. I found that out when I stopped in Houston a few weeks ago and took a flight on this new feeder airline to San Antonio and return.

The enthusiasm doesn't spring from Trans-Texas being a plush airline or one of the world's finest or greatest. The enthusiasm comes from spending time with the men who are trying to build up this airline from scratch, and catching their drive and energy to make a good show of the 2,030-mile network which the CAB awarded them last year.

Trans-Texas is finding that it's real work to start a full-fledged air service. And it costs plenty of money. Not only that, but a feeder airline has to live up to every single standard that a major carrier has to live up to.

The impressive thing about Trans-Texas is that it is being built with aviation experience and background and with caution and conservatism. The Trans-Texas people are not neophytes, they don't have million-dollar ideas, they aren't trying to do the whole job at once, and they are trying so very hard to do a good job.

**Needed in Texas.** This writer hasn't been one of those who believed in setting up feeder airlines all over the country without having some experimental patterns to go by. But in Texas there's a lot of room, there are a lot of towns needing air transport which the larger carriers don't want to serve and never will serve. Texas is a part of the world that can use plenty of air transport. It's a logical place for feeders because the feeders, actually, are pretty good sized airlines. Trans-Texas was awarded 2,030 miles which is a nice jackpot of mileage, but in Texas it covers just part of the state.

Mainspring of this new feeder is R. Earl McKaughan, the president, who is no newcomer to aviation. He's been flying since 1927 although he's still a young man—38—and one of the youngest executives in air transportation.

During the war he was noted for operating the big WASP flying school and he's been the head of Aviation Enterprises, Inc., a large fixed base outfit, for some years. The firm changed its name to Trans-Texas when it began operating. McKaughan (pronounced McKhan) has no fancy ideas, he's well aware through experience that aviation has its pitfalls, he knows he's up against many problems and handicaps before his airline gets on a sound footing.

With 180 employees currently, Trans-Texas has been operating 937 miles on two routes, one Houston-Eagle Pass, and the other Houston-Dallas-Fort Stockton.



Margaret Stephens  
Chief 'Cowgirl' Hostess

On Mar. 27 288 miles were to be opened to Brownsville via Laredo and sometime this year the whole network will be operating.

**Uses Six DC-3's.** The company acquired six DC-3's from American Airlines and each has been overhauled at the Houston base. The fire prevention 04 regulations were taken care of at the same time. The planes are powered with Wright G-102 engines which McKaughan considers most economical for his operation. One more airplane will be needed later on this year.

Although the company does all of its own airplane overhauls, it is sending its engines to Southwest Airmotive at Dallas. Propellers are overhauled by L. L. Walker at Houston, and most of the instruments are handled by Precision Instrument Service. All engineering for modifications and repairs is done by Charles L. Baker, Trans-Texas' own aeronautical engineer.

Since the company began on Oct. 11, 1947, the total operating cost has been

87c per mile which Trans-Texas thinks (quite justifiably) is a good record so far.

Trans-Texas has installed its own homing facilities at all points not now equipped with ranges, using an omnidirectional beam. It's similar to that used by Pioneer Air Lines. The airline has built all of its ground radio and VHF equipment. It operates its own complete teletype system network.

**A Quiet Start.** The fare structure is based on 5½c a mile. Traffic loads haven't been anything to brag about because the company wanted to ease into daily operations without too much fanfare at the start and hasn't yet embarked on a real advertising and selling campaign. It didn't think winter was an auspicious time to start the bands playing. But despite the lack of promotion the loads have been building up slowly.

McKaughan has gathered about him a group of men who have had airline experience, all of which is going to show results as time goes on. Chief pilot and operations manager is Henry E. Erdmann who flew with Pan American Air Ferries in 1940-41 and prior to that ferried planes for the RAF across the North Atlantic. For three years he was flying for Consairways in the Pacific. He knows the flying business.

Roy T. Williams, formerly with American Airlines, is superintendent of maintenance. T. L. McKay is assistant superintendent of maintenance and Omar Beasley, formerly with Braniff, is chief inspector.

William Helken, for 14 years with American Airlines, is superintendent of communications, and Phil Harris, formerly with Chicago and Southern, is assistant superintendent of communications.

Chief dispatcher is Frank Gass, formerly with Mid-Continent, and his assistant is R. S. Jackson, who used to be with Pacific Overseas. Another old-time airline man is Philip S. Reid, superintendent of stations, who was with Capital Airlines for 14 years.

On the traffic side is Stanton B. Danilow, manager of traffic and sales, who was formerly with Braniff.

Trans-Texas now has 11 crews and has concentrated first on getting its operations in first class shape. The two



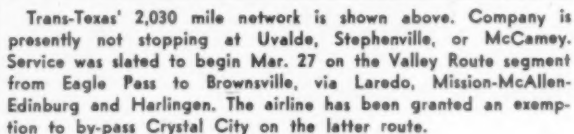
Company's Six DC-3's are Colorfully Marked

AMERICAN AVIATION

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April 1, 1948



Trans-Texas' 2,030 mile network is shown above. Company is presently not stopping at Uvalde, Stephenville, or McCombs. Service was slated to begin Mar. 27 on the Valley Route segment from Eagle Pass to Brownsville, via Laredo, Mission-McAllen-Edinburg and Harlingen. The airline has been granted an exemption to by-pass Crystal City on the latter route.

## O'Connell, Jones for CAB

O'Connell was general counsel of the Treasury from May, 1944, until August, 1947. Since the latter date he has been associated with the law firm of Gardner, Morrison and Rogers.

**Member Harlee Branch, who brings a**

In explaining his son's affiliation with the Gambrell & White law firm, Branch stated that his son was used on non airline cases and that he had taken the matter of employment up with the entire Board before giving his approval to the arrangement. The son left the Gambrell firm in September, 1947, to become a partner in a firm with Alex Wilson. Branch said he had not formulated his ideas for resigning from CAB until late in October, 1947, and did not actually

## MANAGEMENT

offer his resignation until late last January.

**Ryan Too:** The Middle Atlantic decision also involved Acting Chairman Oswald Ryan in dispute, when on Mar. 23 Rep. John Taber (R., N. Y.) asserted that oral statements made to him by Ryan two days before the decision "could scarcely be termed truthful" in light of Ryan's subsequent vote. Taber quoted Ryan as having stated that "no additional service was required between Washington and New York City" and then two days later had voted to give National Airlines such a route.

In rebuttal, Ryan stated he was "greatly surprised" at the charge. He retorted that Taber had tried to put pressure on the Board on behalf of Colonial Airlines. He indicated that he had not thought Taber would be anxious to have the public know that he had undertaken to pressure a member of the Board in a quasi-judicial proceeding.

Ryan explained that he had told Taber that no new regular Washington-New York service was required and that none was authorized in the decision. He said that National Airlines was authorized to serve Washington in order to connect the capital with southern points and Havana, and that it could carry Washington-New York traffic only on through flights.

The Post Office Dept., alarmed at the "risk of improvident expenditure of postal funds", has petitioned CAB to stay the route awards, pending reconsideration.

## MILITARY

### AF Orders 23 Pioneers

Northrop Aircraft, Inc., has been awarded a \$5,500,000 Air Force contract to manufacture 23 three-engine assault transports, military versions of the Pioneer.

New planes have been designated C-125's and will be known as Northrop Raiders. Thirteen of the aircraft will be devoted to tests as light assault transports in the establishment of "air heads," a function formerly served by gliders. The other ten C-125's will be used for Arctic rescue operations and will be fitted with a ski landing gear.

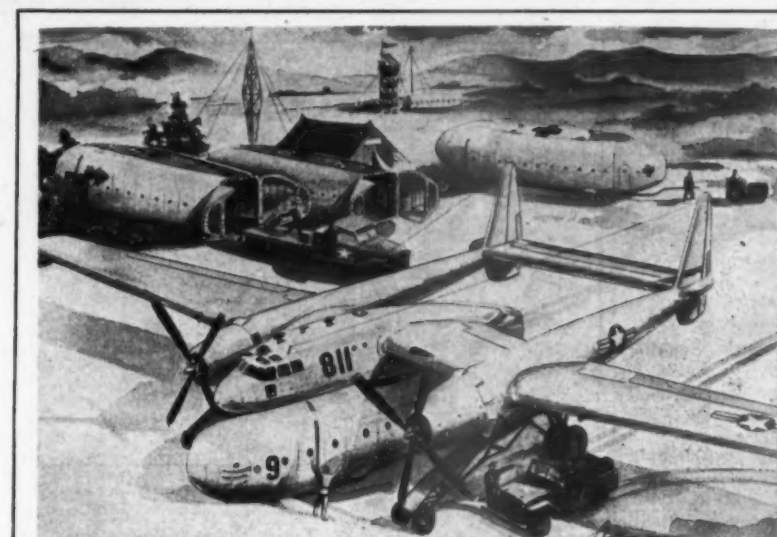
Production on the contract is scheduled to begin immediately. Military purchase of the transport is expected to enable Northrop to push the Pioneer in the commercial field.

## LABOR

### When Is a Strike?

There was a measure of disagreement last week about the strike of the Air Line Pilots Association pilots against National Airlines.

With the strike in its seventh week, the *Air Line Pilot*, ALPA publication, stated that "National's efforts to break the strike . . . met with little success and . . . the airline remained in the same status it was at the beginning of the



**Fairchild's 'Pack-Plane'**—Here is an artist's conception of the Fairchild Aircraft detachable-fuselage transport airplane, prototype of which will be built under U. S. Air Force contract. Design calls for pack with nine-ton payload capacity and capable of accommodating, as a medical unit, 36 litter patients and three attendants. Plane will be able to fly with or without its pack attached and operate fully loaded over a 2,000-mile range. C-120 pack-plane will resemble Fairchild's C-119 Packet in configuration and will be powered with two Wasp Major engines.

walkout to all intents and purposes—grounded."

Officials of National in Miami were taking a different view. As non-union pilots continued to fly scheduled trips, these officials' attitude was: "As far as we're concerned, the strike is over. We're running an airline."

And, as of last week, the following trips were being operated: daily round trips Miami-Newark, Havana-Newark, Miami-New Orleans and Miami-Havana, and two daily round trips Miami-Key West. Loads were reported good.

On Apr. 1, the company planned to put its DC-6s back into service with an additional Miami-Newark trip, and to inaugurate a daily DC-4 flight between Newark and Norfolk.

National had also compiled statistics showing that its new non-union pilots had an average of twice as much DC-4 time as the striking pilots (843 hrs. 16 min. against 489:07). Total average aircraft time of the new pilots was 4,359 hrs. against 4,826 hrs., and night flying time was 1,272:40 against 1,276:08. One of the new pilots has total time of 10,875 hrs., another 12,360 hrs. Average age is 30, and 73% are married.

Meanwhile, striking NAL pilots continued to picket the company's ticket offices in Miami and Miami Beach, wearing their uniforms. The new pilots were flying in business suits while the company ordered new uniforms (which will not look anything like those on the picket lines).

Company officials stressed that the new pilots were on the payroll to stay, that NAL intended to fulfill its obligation to them, and that only court action would get the ALPA pilots back on the line.

National Mediation Board in Washington said no new efforts at settlement were being made. In the words of ALPA President David L. Behncke, "It's a cold, hard strike . . ."

### File Strike Notice

The American Communications Association (CIO), representing about 225 aircraft flight operators, ground radio and teletype personnel of Northwest Airlines, has filed a strike notice with the National Mediation Board. Mil Senior, v.p. of the union, was quoted in press dispatches from Kansas City, Mo., as stating that one of the most critical issues was working conditions of flight operators on charter flights. "We feel that 30 to 36 hours on an airplane is too long for a crew member," he was quoted as saying.

### Guaranteed Forecasting

Weather forecasting at best is a precarious business, but the Society of Airline Meteorologists was willing to guarantee Continental Air Lines a 90% degree of forecasting accuracy in the new employment contract negotiated last fortnight with the airline on behalf of its weather forecasters. And that was just the beginning.

In return for salary increases of approximately \$50 per month, a seniority system, grievance rights, vacations, sick leaves and leaves of absence for advanced studies in meteorology, Continental's weather prognosticators agreed to certain other provisions rarely found in an airline employment contract.

To show its good faith with regard to the use of arbitration in the settling of

AMERICAN AVIATION



## **"I'M A 'SCIENTIST' NOW"**

Remember the hot rock pilot of just a year or so ago? . . . Well, luckily for all of us, this lad's still around. Today he's likely to be designated as project engineer and be flying research, or experimental planes . . . But whatever the assignment, he's still there . . . doing a job to protect our way of living.

The United States Air Force is alert . . . as ever developing new equipment, training personnel . . . in the firm belief that a **STRONG** America is a **SAFE** America . . . Despite a reduction in size and strength, it is making every effort to retain versatility, and effectiveness.

The aircraft industry too continues to serve its principal customers . . . the people of the United States . . . and the air services which guard their well-being, keeping under peace-time restrictions . . . an alert nucleus of its resources.

Republic's share of this responsibility is reflected in the P-84 Thunderjet, now going into service as a standard United States Air Force jet fighter, and the XF-12, four-engine, 450 M.P.H., long range, photo reconnaissance plane. They are worthy successors to the Mighty P-47 Thunderbolt, which in World War II established its own enviable reputation.



**REPUBLIC AVIATION**

*Makers of the Mighty Thunderbolt • Thunderjet • XF-12*

## MANAGEMENT

labor grievances, the Society agreed to pay damages to Continental if it should cause or authorize a strike on the part of the airline's meteorologists. It agreed, furthermore, not to institute a slowdown, work stoppage or interference with the airline's operations in any way. The agreement also contains an anti-Communist clause and embodies the management protection provision of the Taft-Hartley Act.

Both Continental and the SAM thought they had done a good thing for themselves and had set a new pattern which other airlines and their employees might well adopt.

## FINANCIAL

### That Record 1947 Deficit

The scheduled domestic airlines trimmed their payrolls in 1947, in some cases rather sharply. Numerous operating economies were effected. Some improvement in schedule reliability was achieved. New planes were introduced into service. Passenger and cargo revenues reached an all-time high. But it was not enough—the airlines wound up the year with an indicated record deficit of \$16 to \$18 millions.

The annual report of United Air Lines, which took a net loss, after taxes, of \$3,744,366, furnished clear insight into the plight of the industry: boosting revenues in the face of numerous difficulties, only to lose out in the end to rising costs. Said the UAL report:

"As compared with 1945, prices of materials and supplies showed increases ranging from 16% to more than 132%. Thirteen out of 20 categories of items purchased increased more than 50%. There were no decreases."

What was true in United's case was true in greater or lesser degree with all the domestic air carriers. Prices of materials and supplies soared, fuel costs went up, construction costs climbed, employee wages increased substantially. Unit ton-mile costs advanced more than 30%.

**Story in Red:** All airline revenue and expense reports for 1947 were not in, but final reports from 10 of the 19 domestic trunklines (including All-American Aviation) and preliminary reports from four others gave indication as to what the completed story would be.

Three comparatively small carriers showed small net profits, and all others showed losses which ranged from Caribbean-Atlantic's relatively small \$37,654 to TWA's \$4,928,403. Other sizeable red ink figures included Northeast's \$1,303,681, Braniff's \$1,148,762, Colonial's \$957,712; Chicago and Southern's \$758,448, and National's \$725,254. All the losses, minus the small net profits of Continental, Hawaiian, and Inland and Western Air Lines' preliminary net of \$613,177, aggregated more than \$14 millions.

Still unreported were American, Capital and Northwest, all expected to show losses; Eastern, expected to show a profit; and Mid-Continent, which might

show either. The final tally probably would show losses totaling upward of \$16,000,000.

United Air Lines reported operating revenues of \$69,038,174 last year, as against \$64,948,159 in 1946; operating expenses of \$73,877,267, as against \$62,474,030. The net loss of \$3,774,366 was equivalent to \$2.19 per share of common stock outstanding, compared with net income of \$1,086,961, equivalent to 54c per share, in 1946.

Salaries paid in 1947 to the three top UAL officers were listed as follows: W. A. Patterson, president and director, \$59,375, up \$9,375 over 1946; J. A. Herlihy, v.p. and director, \$35,000, up \$5,000; R. W. Ireland, v.p., \$30,000, up \$5,000.

Foreseeing a need for additional capital funds this year, the company will ask its stockholders at a meeting on April 13 for authorization to issue additional stock "if market and other conditions permit."

Continental Air Lines, in its annual report to stockholders, reported a net income last year of \$100,459 after auditor's adjustments and provisions for taxes. This was equal to 37c per share of common stock outstanding, compared to a profit of \$17,939 and 7c per share in 1946. Operating revenues totaled \$4,444,844, while expenses climbed to an all-time high of \$4,325,856.

Pioneer Air Lines, oldest of the feeder airlines, reported 1947 net earnings of \$54,225, in contrast to deficits of \$62,384 in 1946 and \$17,380 in 1945.

**Slick Loses:** Slick's annual report for

1947, its first full calendar year of operations, showed a net loss of \$444,474, as compared to a loss of \$861,259 on approximately 10 months of operation in 1946. After 18 consecutive months of red ink, Slick broke into the profit column for the first time during last September and October, but year-end adjustments, extreme weather conditions in the East in December, and rising costs, particularly for gasoline and oil, led to a fourth-quarter net loss of \$48,709.

Gross operating revenues for the year totaled \$2,816,222, while operating expenses amounted to \$3,261,745. Ratio of current assets to current liabilities was 2.08 to 1—\$1,137,023 against \$547,568. Principal liability of the company was \$1,162,000 in 4% convertible income debentures, due March 1, 1957, which were issued last year to retire a \$500,000 bank loan and provide additional capital.

### Douglas Loses \$2 Million

Mounting international tension has in the past few weeks heavily underscored the warnings of the Finletter Commission and the Congressional Air Policy Board regarding the nation's current deficiencies in air power. If any further proof were needed of the unhealthy financial status of the U. S. aircraft manufacturing industry, there was plenty to be found in 1947 annual report, out late last month, of one of the top aircraft manufacturers—Douglas Aircraft Co.

Unable to sell many transport planes to the financially-strapped commercial



**Air Parcel Post Begins—**International air parcel post was inaugurated by the Post Office Dept. Mar. 15 with packages going to 23 foreign countries. In special ceremony at Washington National Airport, Postmaster General Jesse M. Donaldson accepts a friendship package from Girl Scout Charlotte Rabbitt. At left in front row is Mikan Reuchlin, daughter of the Netherlands Minister. Back row: Paul Aiken, second assistant postmaster general, and Charles Umbaugh, operations agent for Capital Airlines. Under program, packages will be delivered by scheduled airlines to addresses in any of 23 countries in less than five days.

airlines and affected by a sharp recession in orders for new military aircraft, Douglas reported a net loss of \$2,140,579, or \$3.57 a share, for the year ended last Nov. 30, after applying a Federal tax carryback credit of approximately \$12.5 millions. This compared to an operating loss of \$2,019,478 and a net income of \$2,180,522 after tax credits for the 1946 fiscal year.

Sales for the year, up 20% over 1946, included \$95 million for commercial aircraft and parts (including 94 DC-6's) and \$33.5 millions for military aircraft.

Donald W. Douglas, president of the company, observed in the report that no organization for aircraft production can be maintained for long solely on research and development projects and expressed a hope that "in the interests of national security," the government would carry on a program of continuous long-term development of both combat and transport aircraft.

## ROUTE ACTIONS

### Swaps Pick-Up for Feeder

It had seemed like a good idea when All American Aviation, Inc., was awarded a CAB certificate in 1939 to operate an air mail pick-up service covering nearly 90 communities in five states, but the operations have proved increasingly costly.

To pave the way for acceptance of a proffered three-year feeder route certificate authorizing it to engage in transportation of passengers, mail, and property covering extensive routes in a territory with good traffic potentials, All American on Mar. 16 filed with CAB a petition asking immediate suspension in whole or in part of its certificated air mail pick-up Route 49. This was in keeping with a proviso contained in CAB's Middle Atlantic Case decision.

All American stated in its petition that despite a recent increase in mail pay it was losing \$12,000 a month and would soon be forced to file for an increase in mail compensation to approximately 65c per revenue mile flown. This did not come as news to CAB, for the Board itself had instituted suspension proceedings against All American because the carrier had failed to develop non-mail revenues of any consequence, had failed to effect a substantial increase in air mail volume, and was costing the P. O. Dept. sums substantially greater than the postal revenues from mail carried on Route 49.

## RATES & TARIFFS

### NAL Need Disputed

The strongly disputed National Airlines' temporary mail rate case went to the CAB for decision, at the conclusion of hearings Mar. 19. Opposition to the proposed award of \$545,000 to NAL in a lump sum mail payment for the period

of July 14, 1947, through Dec. 31, 1947, came from the Air Line Pilots Association and the International Association of Machinists.

Answering a claim made by ALPA that the proposed payment was an "outright gift" from the government, J. C. Brawner, NAL treasurer and assistant to the president, pointed out that the sum was only 31% of what NAL believed itself entitled to and that it allowed "plenty of cushion" for adjustment in a later permanent rate case. He declared that NAL's actual mail pay need, including a 10% return on investment for the period involved, is actually \$1,334,298.

For ALPA, Francis A. Spencer, American Airlines' co-pilot, presented computations which he said indicated that NAL had no critical financial need requiring aid through a temporary mail rate. Spencer asserted "it is fairly remarkable for a company that is in dire financial straits" to be able to add \$5,923,351 in new equipment during 1947.

### Round-Trip Bargain

Rising operating costs have compelled the nation's airlines to shelve indefinitely their plans for stimulating mass air travel through low passenger fares, but some airline managements are still interested in finding out whether people prefer air travel if they can afford it. One company, National Airlines, last fortnight launched an attempt to find out.

Round-trip fare reductions announced by National to take effect May 1 would put air travel about in a price class with surface travel. The present round-trip fare between New York and Miami is \$137.80. The proposed new rate would be \$86.15, which compares with a \$63.48 rail coach fare and a Pullman fare of \$122.30 with the cheapest berth. Round-trip travelers would actually get a 75% reduction in price of their return trip.

The proposed rate, aimed to attract summer vacationists, would apply for trips completed within any 18-day period from May 1 to December 1, thus making possible vacation trips embracing three week ends. There would be no reservations, but tickets would be honored on all flights. The rates would apply between any city from Norfolk north on National's system and any other city on the system.

Capital Airlines put round-trip fare reductions into effect Mar. 15 to and from 18 key cities on its system. Typical examples: Washington-Pittsburgh, one-way fare \$13.10, round-trip fare, \$23.60, a saving of \$2.60.

Chicago and Southern Air Lines, in addition to its all-expense summer cruises (See page 33), was to put into effect on April 1 a new 16-day Havana summer excursion fare about 25% below normal fares. The new fares, which proved popular last summer, will be in effect until November 30 and will be applicable between all points on C & S's system and Havana.

## Aviation Calendar

Apr. 1-3—First annual meeting Airport Operators Council, Copley-Plaza Hotel, Boston.

Apr. 4-8—Nineteenth annual convention American Association of Airport Executives and second annual showing of American Airport Exposition, Congress Hotel, Chicago.

Apr. 12-13—AIA Technical Committees annual meeting, Hotel Statler, Washington.

Apr. 13—Personal Aircraft Council, AIA, Dallas, Tex.

Apr. 13-15—California State Aviation Conference, Ambassador Hotel, Los Angeles. (Postponed from Mar. 18-19).

Apr. 15—National Aircraft Standards Committee Council Meeting, Hotel Statler, Washington.

Apr. 16-17—National Aircraft Standards Committee National Meeting, Hotel Statler, Washington.

Apr. 17-18—Southern States Air Carnival, Montgomery, Ala.

Apr. 17-24—Northwest Aviation Exposition, Minneapolis auditorium.

Apr. 20-21—Aviation and Airport Management Conference, Minneapolis, sponsored by Dept. of Aeronautics, U. of M., and League of Minnesota Municipalities.

Apr. 20-21—Annual Third Regional Aviation Conference (CAA and NASAO), Minneapolis.

Apr. 22—ACC Flight Panel Meeting on ICAO Performance and Temperature Accountability Requirements, Commerce Bldg., Washington.

Apr. 22-24—American Helicopter Society Fourth Annual Forum, Philadelphia.

Apr. 23-24—Flying Farmers Associations of five states meet, University Farm Auditorium, St. Paul, auspices Minnesota Association.

Apr. 24—Dedication of Skyways I and II and dedication of CAA Aeronautical Center at Oklahoma City.

May 12-15—Aviation Writers Association national convention, Commodore Hotel, New York.

May 18-20—Aircraft Industries Association directors meet, Williamsburg, Va.

June 1-6—All-Woman Air Show, Miami, sponsored by Florida chapter, Ninety-Nines.

June 8-10—Airport Management Conference, Texas A&M College, College Station. (Dean Howard W. Barlow in charge). (Formerly scheduled for June 15-17).

June 14-15—Airlines Medical Directors Association annual meeting, Royal York Hotel, Toronto, Canada.

## International

Apr. 20—ICAO Rules of the Air and Air Traffic Control Division, Montreal.

May 4—ICAO European-Mediterranean Regional Meeting, Paris.

May 17—ICAO North Atlantic Regional Meeting, Paris.

May 17—ICAO Facilitation Division, Geneva.

May 25—ICAO Council, Fourth Session (Geneva).

May 28—ICAO Legal Committee (Geneva).

June 1—Opening of Second ICAO Assembly, Palais des Nations, Geneva. (About 3 weeks).

July 13—ICAO North Pacific Regional Meeting, Honolulu or Vancouver.

Aug. 24—ICAO African-Indian Ocean Regional meeting. (Site not chosen).

Aug. 27-Sept. 3—Federation Aeronautique Internationale, Cleveland.

## PERSONNEL

### ADMINISTRATIVE

**Thomas D. Neelands, Jr.**, New York investment banker; **Raymond G. Lochiel**, vice president and comptroller of the company, and **Robert J. Wilson**, vice president in charge of properties and personnel administration, were elected to fill three existing vacancies on the board of directors of Capital Airlines.

**Charles Thomas Fisher, Jr.**, of Detroit, was elected a director of American Airlines, replacing **Walter Scott McLucas**, who resigned for business reasons. Fisher is president of the National Bank of Detroit and v.p. of the Detroit Board of Trade.

**Robert F. Six** was re-elected president of Continental Air Lines for the 12th consecutive year at the annual stockholders meeting in Denver. **Louis H. Mueller** was re-elected chairman of the board of directors.

**Alvin P. Adams** has resigned as a director of California Eastern Airways because of pressure of other business, but is retaining his stock holdings in the company.

**Byron H. King, Jr.**, of Orlando, was elected a director of Florida Airways at the annual stockholders' meeting.

**Charles B. White**, Houston investment broker, has been elected a director of Pioneer Air Lines.

**Dr. Paulo Sampaio**, president of Panair do Brasil, will take over duties of special representative of Pan American Airways in Brazil, which were recently vacated by **Adm. Paulus P. Powell**.

**Harry R. Playford** has been re-elected president and a director of U. S. Airlines, Inc., at recent stockholders meeting in St. Petersburg, Fla.

**William J. Logue**, formerly with American Airlines, and now with Northeast Airlines, has been appointed NEA general purchasing agent.

**Morris B. Baker** has been named assistant to director of public relations of Chicago and Southern Air Lines. He was formerly with TWA and is author of a textbook on airline traffic and operations.

**Roger W. Fleming**, who for the past two years has been a member of Pan American Airways' Washington public relations and press staff, has accepted a position with the Folger Nolan investment banking firm in Washington.

**David C. Fralley** has been appointed assistant public relations director of American Airlines' eastern region, with headquarters in New York.

**George Herrick**, former technical editor of *Air Transport*, has been appointed U. S. public relations director for SABENA Belgian Airlines.

**Mrs. Tyrone B. MacDuff** has been promoted from supervisor of office service to traffic administrative assistant for Western Air Lines. **Mrs. Cecilia Lee** has taken over her former position.

### OPERATIONS-MAINTENANCE

**George Cooke** has been advanced from chief pilot of Empire Air Lines to superintendent of operations, replacing **Del Hendrickson**, resigned. **Flight Capt. Fred Orr** succeeds Cooke as chief pilot.

**A. B. (Tony) Favero**, a 10-year veteran with Western Air Lines, has been made superintendent of service and overhaul; **Frank Vosepka** has been advanced from chief inspector to superintendent of inspection, and **Harrison Holzapfel** has been promoted from electrical engineer to engineering manager.



Lochiel



Wilson



Neelands

Elected to fill vacancies on Capital Airlines' Board

**Vernon A. Dorrell** has been appointed general sales manager of Aviation Maintenance Corp. Formerly v.p.-operations for Mid-Continent Airlines. Dorrell joined AMC last December to direct the introduction and sales of the Allison airborne radar. **Charles M. Fischer**, AMC v.p. of flight operations who has been administering sales department executive duties, will now give full time to flight operations.

**James A. Luque** has been appointed director of passenger service of Peruvian International Airways, succeeding **Carroll Dunham 4th**, resigned.

**William D. Galli** has been named station manager for Eastern Air Lines at Pomona Naval Air Base (Atlantic City).

**M. A. (Mike) Simpson**, formerly director of reservations for Western Air Lines, has been appointed to the newly created position of director of passenger transportation.

**E. V. Roberts**, former station manager for Mid-Continent Airlines at Sioux City, Ia., has been transferred to New Orleans in the same capacity.

**John S. Gunter**, formerly chief agent for Eastern Air Lines in Savannah, Ga., has been appointed station manager in Florence, S. C., new EAL route point.

**P. E. Peirce**, formerly station coordinator for Western Air Lines' southern division, heads up the company's new In-Flight Service department created through consolidation of the stewardess and food and supply service departments. **Lorraine Pomeroy** has been named regional supervisor of stewardess service, replacing **Mitsi Gibson**, who resigned to be married.

**E. Van Vechten** has been appointed to the new position of general operations manager of Pacific Airmotive Corp., at the same time retaining his duties as director of procurement and material.

**F. W. Blanford, Jr.**, former Eastern Air Lines station manager in Lake Charles, La., has been transferred to Orlando, Fla., in same post.

### TRAFFIC & SALES

**Harding L. Lawrence** has been promoted from general traffic-sales manager of Pioneer Air Lines to v.p.-traffic.

**George L. Russell** has been promoted from manager of reservations and ticket sales for Capital Airlines at Buffalo to district sales manager.

**George A. Stevens** has assumed the post of district traffic manager for Mid-Continent Airlines at Tulsa.

**Charles H. Shuff** has been appointed traffic and sales manager for Eastern Air Lines in the New York City-Newark area.

**Roland E. Gustavel**, formerly an outside salesman for United Air Lines at Portland, has been appointed district traffic and sales manager at Boise, replacing **A. E. Nelson**, who resigned.

AMERICAN AVIATION

## PERSONNEL

**J. J. Reagan**, formerly Northwest Airlines' senior traffic representative at Milwaukee, has been named assistant district traffic manager in Cleveland.

**Vance L. Tomlin**, former sales executive for Capital Airlines in Birmingham and Chattanooga, has been made district sales manager in the New Orleans area.

**William E. McGarry** has been transferred from Buffalo, where he was district sales manager for Capital Airlines, to Atlanta, where he will serve in the same capacity.

**George B. Wharton**, formerly with Eastern Air Lines and more recently with Capital Airlines at Baltimore and then Richmond, has been named district sales manager for Capital at Mobile.

**W. Gordon Wood**, formerly general traffic supervisor for Trans-Canada Air Lines, has been advanced to general traffic manager. He has been with the company since 1939 except for a period of wartime service as an air observation pilot.

**George Dart** has been named district sales manager for The Flying Tiger Line in the New York territory, replacing **Edward Jenkins**, resigned.

**D. E. Derrah**, formerly assistant district traffic manager for Northwest Airlines at Cleveland, has gone to Pittsburgh in same position.

**Robert E. Caskey** has been appointed general sales manager of California Eastern Airways, and **James B. Watriss** has been named assistant sales manager.

**William K. Turner**, who joined Pan American Airways as a flight steward in 1939, has been named assistant to the Latin American Division traffic manager in charge of personnel.

**Andrew G. Diddel**, formerly traffic and sales manager for Eastern Air Lines in Louisville, has been shifted to same post in Detroit.

**Walter D. Peck** has been appointed assistant chief of CAB's Foreign Air Transport Division. He has served with several airlines, his most recent airline post having been as director of route development for American.

**Warren Lowe Baker**, manager of the aviation department, Socony-Vacuum Oil Co., has been named chairman of the aviation advisory committee of American Petroleum Industries Committee. He succeeds **Aubrey Kief**, The Texas Co. **Middleton DeCamp**, head of aviation department, Standard Oil Co. of Kentucky, is vice chairman.

April 1, 1948

# Airline Commentary

By ERIC BRAMLEY

"SUBJECT to approval by the stockholders Mar. 29, Eddie Rickenbacker and a financial group . . . completed arrangements Mar. 4 for the purchase of Eastern Air Lines division of its parent corporation, North American Aviation Inc. . . . The purchase marks a decided victory for Rickenbacker, who has been vice president of North American and general manager of Eastern since 1934. The price which he and his associates will pay is \$3,500,000, a \$250,000 increase over the top offer of John Hertz, partner in Lehman Brothers, who sought the line for a merger with Transcontinental & Western Air Inc." . . . This is an excerpt from a news story which appeared in AMERICAN AVIATION on Mar. 15, 1938 (the story was a scoop, too) . . . Three days ago Captain Eddie and his gang celebrated the 10th anniversary of the present EAL . . . We offer our congratulations to a company that has certainly come a long way in 10 years . . . For example, on Dec. 31, 1937, the EAL division reported total assets of \$3,170,843 . . . A few months ago total assets were \$39,062,786, and operating property and equipment alone was \$18,603,908 . . . Note that the airline was purchased for \$3,500,000 . . . All that would buy you today would be a few of EAL's airplanes . . .

Pilots, here is a story for you . . . We picked it up from Naval Air Transport Service . . . It seems that one of its pilots was returning to Kodiak, Alaska, from a routine training flight in a PB4Y (Liberator) . . . And here's what NATS says happened: "A strong northeast wind was blowing, giving the pilot a considerable crosswind-tailwind component, and the runway was very slippery because of compact snow over a layer of ice. The approach was a trifle high and fast, and touchdown was not made until almost halfway down the runway. Braking action appeared to have little effect, and with the end of the runway rapidly approaching, the pilot endeavored to ground-loop the plane by full application of the port throttles. The ship responded by executing a graceful 180-degree turn, remaining in the middle of the runway all the while, and continued down the runway tail first, whereupon the pilot applied full throttle on all four engines, using the thrust as a brake, and came to a stop on the turnaround area at the end of the landing strip. All that remained was to taxi back to the hangar." . . . This can hardly be put in the category of a recommended practice . . .

Little pieces of "intelligence" from the air transport industry: United Air Lines' personnel at Bellingham, Wash., were somewhat startled and amazed when a group of neighboring Lumis Indians came into the ticket office, dumped a two-gallon ice cream can full of silver dollars on the counter, and requested a \$143.15 ticket from Seattle to New York . . . LaMotte Cohu, TWA president, has started an exclusive club along lines of the Short Snorters. It has the mysterious name of FASN, but we'll be darned if we know what it means. Cost of one dollar, and bill must be carried . . . A Delta Air Lines stewardess on a DC-4 attached a pedometer to her leg and discovered that on a Chicago-Miami round trip she walked eight miles . . . Here's a real find—unquestionably the only treasurer of an airline with a nickname of Happy. He's R. O. "Happy" Parker, secretary-treasurer of Trans-Texas Airways, one of the new feeder airlines (Houston). He lives up to his nickname despite the headaches of finding the money to meet the payroll. Must be that Texas climate, not the airline business . . .

A "baby lounge" is now being operated at Minneapolis Airport . . . For 50c a mother can have access to this room which is complete with beds, cradles, toys and everything to make baby happy . . . It's a self-service proposition . . . With the number of babies you see these days on the airlines, there's certainly a need for something like this . . . And we understand that the airport is making money from it . . .

Add pilot's public relations activities: Capt. H. E. Whitsett and First Officer J. F. Bachmeier are suggesting on their regular flight reports that passengers join in a "terrain guessing contest" . . . They explain that the Kiamichi Mountains in Oklahoma are among the highest points on MCA's system, and invite passengers to guess their height above sea level as the MCA plane passes over them . . . Winners are awarded an "all-expense, personally-conducted tour of the cockpit" at the next stop, Longview, Tex. . . . Sounds like a smart stunt . . .

## Successor to DC-3?

## Proposed Design of DC-9

The Douglas Aircraft Co., still undecided as to whether it will produce its proposed 28-passenger DC-9 as a replacement for the DC-3, is ready to proceed rapidly on the project should the air transport industry's financial situation improve sufficiently to assure a market.

Type specifications for the DC-9 were first drawn up by the Douglas company last July and were revised in October. Design philosophy behind the proposed plane was that a replacement for the DC-3 soon would be urgently needed by both domestic and foreign airlines. Such belief still appears valid but principal stumbling block has been the inability of the airlines to finance new equipment purchases in any appreciable quantities.

A second important factor which has dampened the DC-9 outlook appreciably is certification since the plane was conceived of two more DC-3 replacement possibilities—the Martin 2-0-2 and the Convair-Liner. Airlines that have found it possible to start retiring their DC-3's have placed orders for one of these two new aircraft types.

Type specifications for the DC-9—published here for the first time—disclose, however, that Douglas' proposed twin-engine transport might be a more suitable replacement for the DC-3 in certain kinds of operation. It is smaller and reportedly more economical than the other two DC-3 successors, yet it includes most of the modern improvements being incorporated in postwar transports. The DC-9 is considerably slower than either the 2-0-2 or Convair-Liner, but is substantially faster than the DC-3.

The DC-9 equals or exceeds basic design requirements of the DC-3 and offers in addition higher speeds, greater payload and reduced passenger-mile costs. Stability and control promise to exceed the new requirements, especially as regards low-speed handling characteristics. DC-9 also will have tricycle landing gear, steerable nose wheel, emergency air brake system, thermal anti-icing, cabin pressurization, radiant heating, larger doors, a passenger-loaded luggage rack and a convertible cabin in which first two rows of seats can be adapted to yield additional cargo space.

## Specifications

Standard model of the DC-9, as outlined in revised type specifications, is powered by two Wright Cyclone R-1820-C9HE1 engines, rated at 1,475 hp for take-off, driving three-bladed Curtiss electric full-feathering P-89B propellers 13 ft., 1 in. in diameter.

Plane has a wing span of 101 ft., length of 75 ft., 8 in., and height of 16 ft., 11 in.

Manufacturer's weight empty is 20,850 lbs., plus or minus 2%, and maximum takeoff gross weight is 31,445 lbs. Wing loading at takeoff gross is 33.1 lbs./sq. ft. and power loading is 10.7 lbs./bhp takeoff and 12.3 lbs./bhp maximum continuous.

Performance guarantees for the Wright-powered standard version include a 258 mph speed with 785 bhp from each engine at approximately 17,800 ft.; an absolute range at 10,000 ft. altitude of 2,590 miles, within plus or minus 5%, with 870 gals. of fuel and an average air speed of 168 mph; a one-engine service ceiling for a 104 ft./min. rate of climb of 15,000 ft., plus or minus 10%; a CAR field length of 3,620 ft., plus or minus 10% for take-off and a field length for landing of 3,600 ft., plus or minus 10%.



Artist's Drawing of the Proposed DC-9

at sea level airports without obstacles. All the foregoing are based on a gross weight of 31,445 lbs. except the last item which is figured at the landing gross weight of 30,050 lbs.

Estimated performance figures at 31,445 lbs. show level flight speeds of 258 mph with 70% of high blower maximum continuous power speed at critical altitude (17,800 ft.), 253 mph with 67% of low blower maximum continuous power speed at critical altitude (11,600 ft.), 227 mph with maximum cruising power at sea level, and 237 mph at 10,000 ft. with 60% sea level rated power; two-engine maximum rate of climb at 22,900 ft. of 431 ft./min.; two-engine service ceiling of 28,700 ft.; and CAR take-off field length of 4,710 ft. at 5,000 ft. altitude (without water injection).

Fuel consumption for various ranges, gross weights and cruising speeds, using ATA formula for a 10 mph headwind with a 5% increase in engine manufacturer's specific fuel consumption and ATA allowances for warmup, taxiing, take-off, climb, maneuvering and reserve, is estimated at 10,000 ft. as follows: 250 mi. (30,800 lbs.-171 mph) 112 gal.; 500 mi. (31,400 lbs.-172 mph) 210 gal.; 1,000 mi. (31,455 lbs.-171 mph) 403 gal.; 1,500 mi. (31,445 lbs.-170 mph) 588 gal.; 2,500 mi. (31,445 lbs.-167 mph) 949 gal. Comparable figures at 17,800 ft. with high blower are: 250 mi. (31,100 lbs.-260 mph) 177 gal.; 500 mi. (31,445 lbs.-260 mph) 317 gal.; 1,000 mi. (31,445 lbs.-260 mph) 594 gal.; 1,500 mi. (31,445 lbs.-262 mph) 870 gal.; 2,480 mi. (31,445 lbs.-264 mph) 1,412 gal.

Fuel capacity is 870 gallons, and outer

wing tanks, which will carry up to 650 gallons of additional fuel, must be installed to attain range in excess of 1,920 miles at 10,000 ft. or 1,500 miles at maximum cruising power.

## Flying Costs

Direct flying costs for standard DC-9 equipped with Wright R-1820 engines with maximum gross take-off weight of 31,445 lbs. range from 40c per plane mile at 375 miles to 37c per plane mile at 1,000 miles. Costs per passenger mile are approximately 1.15c at 375 miles and 1.5c at 1,000 miles. Payload is a full 7,000 lbs. at 375 miles, curving down to 4,900 lbs. at 1,000 miles. Average cruising air speed is 260 mph.

With the P & W R-2180 engines and the maximum gross take-off weight 33,180 lbs., direct flying costs range from 42c per plane mile at 375 miles to 38c at 1,000 miles.

Costs per passenger mile are 1.2c at 375 miles to 1.68c at 1,000 miles. Payload is 7,000 lbs. at 375 miles, declining to 4,500 lbs. at 1,000 miles. Average air cruising speed is 280 mph.

The DC-9 wing is of all-metal full cantilever construction comprising a center section incorporating permanently attached nacelles, two detachable outer wing panels, and two detachable wing tip sections. The center section contains bays

incorporating integral type fuel tanks located between the front and rear spars and between the outer side of each nacelle and the center section of outer wing joint. Space provisions are made in each outer wing panel aft of the spar for incorporation of additional integral type fuel tanks.

Ailerons are all-metal frame construction, fabric covered, as are the control surfaces, in the tail group. Douglas double-slotted, partial-span type wing flaps of all metal construction are metal covered and synchronized mechanically.

The fuselage is all metal, semi-monocoque construction incorporating transverse frames and longitudinal stiffeners with aluminum alloy sheet covering, and is designed for cabin pressurization.

The pressurization system will have a supercharger with a centrifugal blower driven by hydraulic pumps mounted on each engine. It will have an automatic pressure regulator and will be capable of maintaining cabin pressure equivalent to 8,000 ft. at an airplane altitude of 20,000 ft.

Thermal anti-icing, employing internal combustion heaters in each wing

(Turn to page 22)

AMERICAN AVIATION

**DC-9 Details**—Three drawings at right provide complete dimensions on the proposed plane's exterior. Though designed for a gross weight of only 31,445 lbs. (6,500 and 8,000 lbs. less than the Martin 2-0-2 and Convair-Liner, respectively), the DC-9 is a larger airplane in length and span than either the 2-0-2 or Convair-Liner.

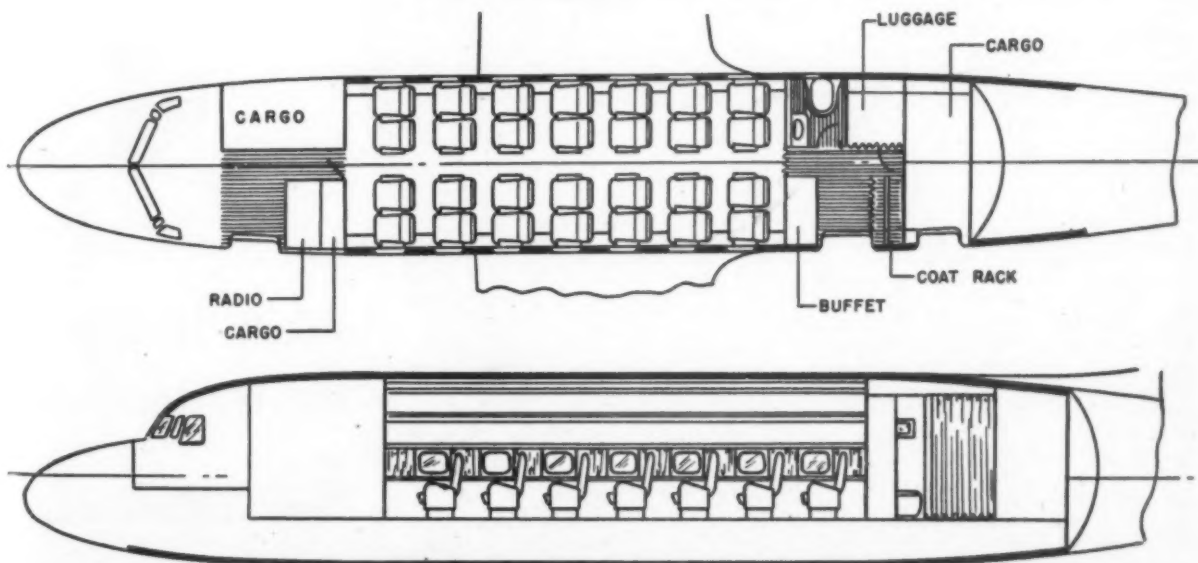
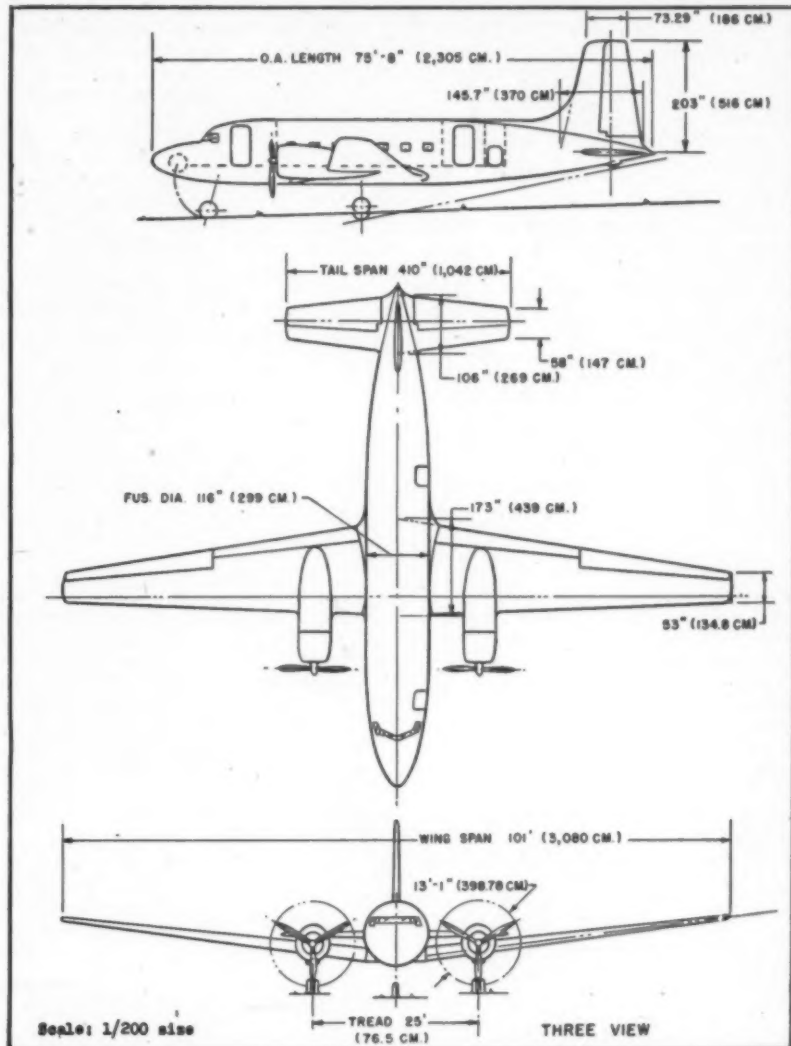
Span of DC-9 is 101 ft., compared with 93¼ ft. for the 2-0-2 and 91¾ ft. for the Convair plane. DC-9 is 4 ft. and 1 ft. longer than the 2-0-2 and Convair-Liner, respectively. The Convair carries 40 passengers, the 2-0-2 has been modified for 36, and the DC-9 is planned for 28.

Some 5,200 lbs. heavier than the DC-3, the DC-9 would seat seven more passengers and travel nearly 50 mph faster than the plane it is designed to replace. Other changes from the DC-3 include tricycle landing gear, steerable nose wheel, thermal anti-icing and an emergency air brake system.

Drawings below show interior arrangements planned for the Douglas plane. Fuselage is divided into pilots' compartment, a cargo compartment aft of the cockpit, a main passenger cabin, storage compartments and buffet, lavatory, a second cargo compartment aft of the main cabin.

A luggage compartment lined with fibreglass paneling and suitable for passenger hand baggage is located between the lavatory and the aft cargo compartment. By removing a web gate this baggage space can be made a part of the main cargo compartment. Web gates, posts and partitions also are furnished to convert one or two forward rows of seats into a cargo area.

Radiant heating and cabin pressurization have been incorporated for increased passenger comfort.



plus one in the aft-end of the fuselage for the empennage, will be used and windshield heat anti-icing air will come from the main cabin heater. Propeller anti-icing will be electrical and the carburetor pre-heat system will be augmented by a carburetor alcohol anti-icing system for induction system anti-icing.

Optional installations on the DC-9 include the new Pratt & Whitney R-2180 engines in lieu of the Wright R-1820's and Hamilton Standard hydromatic propellers with 43D50 hubs and 6841A-0 blades instead of the Curtiss electrics.

Water injection, automatic pilot, integral loading steps, propeller synchronizers, individual main wheel braking, underwing refueling, reversing propellers and automatic cabin heat control come under the heading of optional installations.

Installation of the R-2180 engines, which develop 1,650 hp, adds 1,390 lbs. to the empty weight of the plane, increases the useful load 1,410 lbs. and the take-off gross weight by 2,800 lbs. Water injection, however, is required for take-off weights in excess of 34,900 lbs. to meet CAR second segment take-off climb requirements.

The landing gear, which is of the fully retractable tricycle type, incorporates four main wheels, two on each side, mounted aft of the center of gravity, and a steerable nose wheel. The main landing wheels and struts are completely housed in the nacelle when retracted.

The 14 double seats in the passenger cabin are arranged in seven rows, each row having one double seat on either side of the aisle. The central aisle has a head clearance of approximately 80 in. and a width of approximately 18 in. between arm rests.

One innovation in the development of DC-9 plans was a joint conference held early this year by Douglas engineers and members of an Air Line Pilots Association advisory committee, during which the veteran pilots voiced their opinions on what features should be incorporated in the proposed airplane for maximum airline safety and operating efficiency.

## ENGINEERING

### Engine Power Boosted 20%

A recently developed combination gas turbine-reciprocating aircraft engine, held secret for some time, has finally been described by officials of the Wright Aeronautical Corp.

The new "compound" engine, known as the "Turbo-Cyclone 18" and now in operation at the Wright Aeronautical Experimental Laboratories, Woodridge, N. J., employs three light-weight turbines mounted on the rear of a standard Cyclone 18, the power plant now powering the Constellation and several service aircraft. Hot exhaust gases leaving the

engine at high speed are channeled through these turbines, spinning them as air does a windmill. Energy developed by the whirling turbines is geared back to the engine crankshaft, thus increasing engine power.

Wright tests have shown such compounding boosts the Cyclone 18's power by 20% or, if the engine is operated at presently used power settings, it reduces fuel consumption as much as 20%. Such economy can provide also a substantial increase in aircraft range.

As another example of the compound engine's potential value, engineers said that the Navy's Truculent Turtle which holds the world's nonstop distance record of 11,236 miles, could have flown 13,483 miles, or 15 percent farther, had it been equipped with the new Turbo-Cyclone 18's.

Successful development of such a compound engine marks an initial step along the only avenue believed open for substantial increases in reciprocating engine power.

Engineers long have recognized that about half of a conventional aircraft engine's energy is lost through the exhaust and since war's end, they've been seeking means of capturing and applying this wasted power. Both exhaust jet thrust and gas turbine applications have been proposed, with Wright experts concentrating on the latter.

Successful completion of their venture was first hinted earlier this year by Guy W. Vaughan, president of Curtiss-Wright Corp. It has now been disclosed that a full-scale testing program with the engine has been under way for a year. Engineers report engine performance during tests has exceeded expectations.

### P & W Pushes New R-2180

Pratt & Whitney Aircraft is conducting a concerted sales effort to interest both the airlines and aircraft manufacturers in its recently developed engine, the R-2180 Twin Wasp. New power plant is being offered the air carriers as a replacement for the R-2000's used on nearly all DC-4's, and several operators are reported considering the shift.

Rated at 1,650 horsepower against the R-2000's 1,450 hp, the new R-2180 is said to be capable of boosting DC-4 speed to within 20 miles per hour of that of its newer sister, the DC-6. Operating costs also are reportedly quite favorable for the engine's power rating.

Heightening the interest of several airlines in adopting the new power plant for DC-4's is their troublesome experience with the R-2000-13, postwar version of the original C-54 engine. P & W engineers are offering the R-2180 as a cure for many of the ills sometimes encountered in the R-2000.

Another factor favoring consideration of the new engine by DC-4 operators is the fact that P & W makes no spare

# 92 ton feather

The U.S. Navy's Lockheed Constellation (big brother of the famed Lockheed Constellation) weighs 92 tons—twice as much as the average airliner.

Yet its five-ton, dual tandem landing gear is so finely articulated that the plane can land light as a feather.

So light, in fact, that there's a signal in the cockpit to inform the pilots when the prerotating wheels touch the ground during a landing.

The gear spreads the weight of the Constellation over such a large area that the airplane can operate from any normal CAA Class 4 airport without strengthening or lengthening of runways.

More than 50,000 engineering man-hours went into Lockheed's development of the remarkable gear.

Such pioneering in design and research, in combination with resourceful production techniques, keeps Lockheed well in the forefront of aviation.

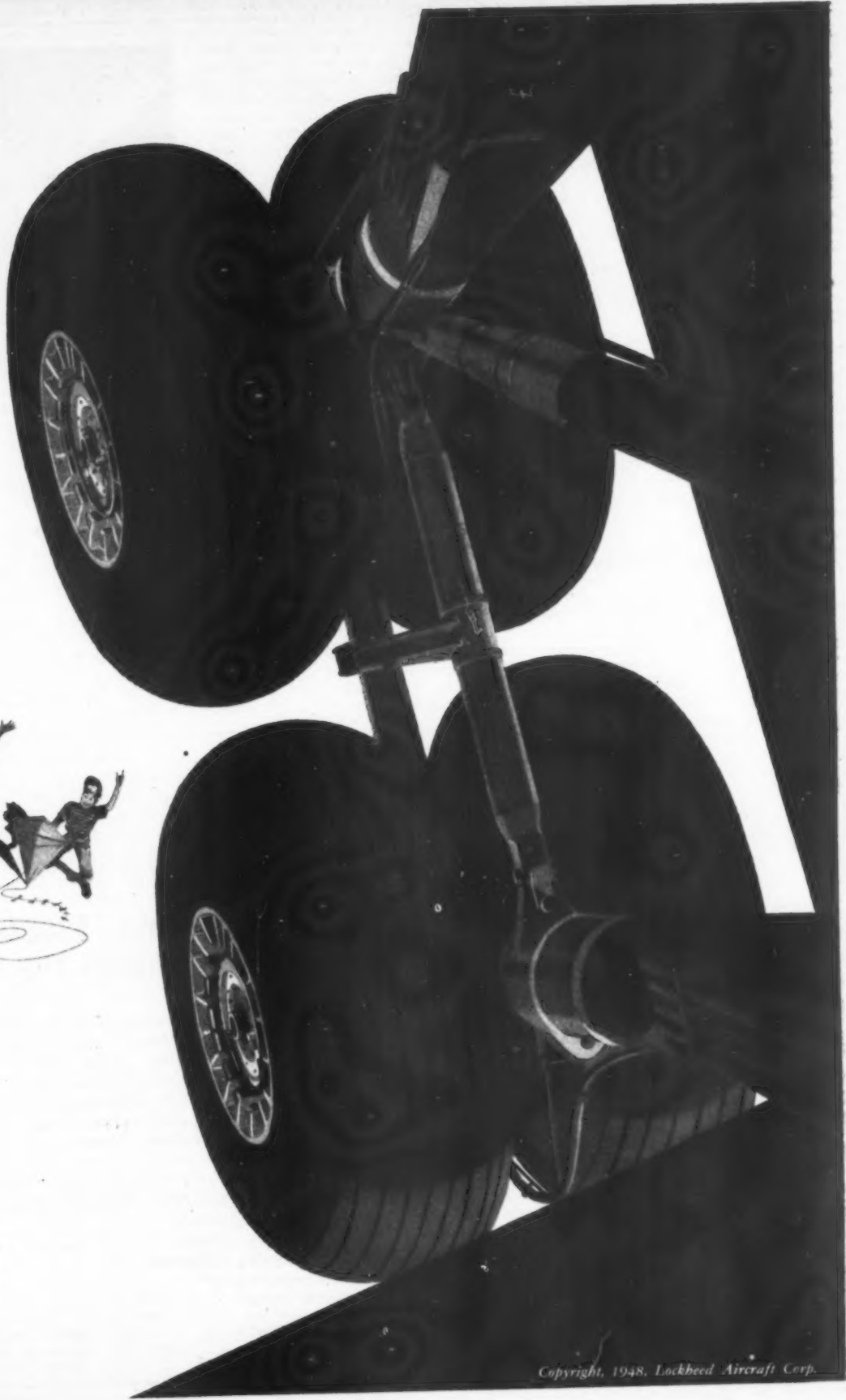
*Lockheed Aircraft Corporation, builders of the U. S. Navy P2V Patrol Bomber, holder of the world's long-distance non-stop record (11,236 miles); the P-80 Shooting Star, the U. S. Air Force's standard jet fighter; and the Constellation, world's leading transport.*



## look to lockheed for leadership



*Lockheed Constellation*  
AMERICAN AVIATION



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## OPERATIONS-MAINTENANCE

parts for several models of the R-2000, including the -7 and -11, and carriers having such engines must depend wholly on war surplus for parts.

The new version of Sweden's two-engine Scandia transport, now entering production, will use the R-2180. The 32-passenger plane will have a top speed of 285 miles per hour, it is reported.

Pan American Airways' Latin American Division was reported near a decision on adopting the R-2180 for some of its DC-4's. If the engine manufacturer and the Douglas company can prove its suitability, company will put the new engine on 25 of the division's 33 DC-4's.

Frequently referred to as "half of a 4360," the R-2180 has been regarded in some quarters as a development of the R-4360 Wasp Major which powers the Stratocruiser and many other large aircraft types. Actually, the Twin Wasp had its origin back in the mid-1930's. It was first installed in 1936-37 in the original DC-4. (For previous article on the R-2180, see *AMERICAN AVIATION*, June 15, 1947.)

### Wright's Super Cyclone 18

Wright Aeronautical Corp., engine-building division of Curtiss-Wright Corp., has announced development for the Navy of a new 2,700-horsepower version of the Cyclone 18 engine. The improved power plant, designated the C18CA, reportedly has even greater

horsepower available for combat operation through the use of water injection.

Newest Cyclone 18, most powerful 18-cylinder engine in the world, features lower ratio of engine weight to power, increased performance at high altitudes and a newly developed cylinder design which provides better engine cooling. It is scheduled for early use in some of Navy's latest patrol and bombing planes, the Wright company said.

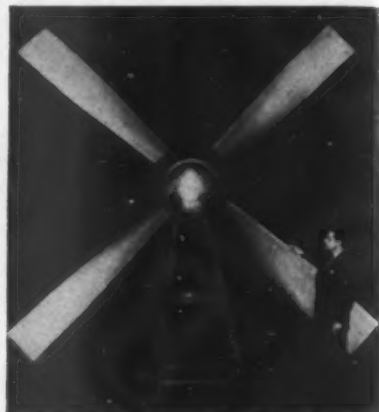
Introduction of the C18CA is another step in the decade-long development of the Cyclone 18 series by Wright, the Army and Navy.

The 2,200-hp version was used to power Boeing B-29 Superforts during wartime and is now in use commercially on Lockheed L-49 Constellations. In 1945 the 2,500-hp BD model of the engine was announced and later applied to the Lockheed P2V-2 (Truculent Turtle type) and the Douglas XBT2D. Commercially, the 2,500-hp engine has been incorporated in both the 649 and 749 models of the Constellation.

### Largest Hamilton Prop

The largest propeller ever produced in the East Hartford, Conn., plant of Hamilton Standard Propellers Division, United Aircraft Corp., is now being manufactured there. The new propeller—16½ feet in diameter—is also the first reversing hydromatic propeller to use four hollow steel blades.

Propeller will be first installed on 36 Boeing Stratocruisers ordered by British



Thomas B. Rhines, Hamilton Standard's chief development engineer, with new propeller.

Overseas Airways Corp., Northwest Airlines and Pan American Airways. It also has been selected for several military applications.

As used on the Stratocruisers, new propeller incorporates automatic synchronization, rapid feathering, three-second reversing and internal electric de-icing.

The eight-foot blades are square-tipped and employ NACA low-drag airfoils. Due to hollow steel blades and one-piece barrel structure in the hub, propeller is lightest for its size ever developed.

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Wright: 2600-29-23-22-13, R1820-87-66-60-56-52

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Geneva, Switzerland

# RTCA's Target Program for Traffic Control

(Editor's Note: This is second instalment on air traffic control report of Special Committee 31 of the Radio Technical Commission for Aeronautics. Previous discussion appeared in March 15 issue, p. 24.)

As a result of efforts made by the United States last year, aviation now has an allocation, on an international basis, of the frequency spectrum from 960 megacycles to 1600 megacycles, with the exception of the band between 1215 mc and 1300 mc. It is proposed that for the purposes of integration of circuitry and of airborne antennas, the entire target system of air traffic control and navigation be accomplished in this frequency spectrum. Much development has been done in this region, but much more remains to be done.

In the target system it is proposed to separate the airborne traffic control equipment from the airborne navigation equipment. This must be done to make the traffic control equipment sufficiently simple in order that all aircraft, both large and small, can carry it. Thus the navigation equipment remains unrestricted, and the user can choose either complete or partial equipment, depending upon the navigation functions he desires or can afford to provide for his aircraft.

## Units Required

The airborne units which must be developed are (1) the basic equipment for traffic control with its associated private line communication channel and (2) the complete equipment for short distance navigation, including landing.

The airborne traffic control equipment will be a limited channel transmitter-receiver which will reply to interrogations from the ground, automatically providing the ground controller with aircraft identity, altitude, distance, and bearing. An associated private line type communication channel between air and ground will serve to exchange information between the aircraft and the ground concerning the condition of airspace occupancy, clearances, traffic information, etc., as well as to provide a check on the quality of information extracted directly from the airborne traffic control equipment.

The complete multi-channel airborne equipment for short-distance navigation will provide the aircraft with distance and bearing information in such manner that any desired course can be flown accurately, either manually or automatically, including three-dimensional courses down to landing. It also will provide navigation information for taxiing, along with aural communications and a pictorial situation display to enable the pilot to monitor traffic conditions in his vicinity.

The ground equipment which must

be developed will consist of the following elements:

(1) The traffic data relay equipment which constitutes the ground counterpart to the airborne traffic control transmitter-receiver and its associated private line communication equipment.

(2) The automatic air traffic control equipment in the form of computers which constantly and automatically analyze the complete traffic situation and transmit appropriate signals to the aircraft and to the ground controllers. These signals will consist of condition of airspace occupancy, desired non-conflicting flight paths, etc.

(3) Nav-aid equipment which is the complete ground-based navigation equipment plus facilities for the transmission of the pictorial traffic situation display to the pilot.

(4) Landing navigation and its monitoring equipment.

(5) Airport surface navigation equipment.

(6) Airport utilization, planning and control equipment.

(7) Intercommunication links between ground facilities.

From the abbreviated list above it is apparent that the development program alone is one of tremendous scope.

## How It Will Work

By 1963 when the complete system is in operation, a typical aircraft flight will be conducted somewhat as follows:

Before departure the pilot will submit a flight plan which contains pertinent facts such as time of desired takeoff, route to be followed, airspeed, airport of destination and estimated time of arrival. These items will be inserted into the automatic traffic control equipment which rapidly will analyze the air traffic situation as it exists and as it is expected to develop, and will produce a time for takeoff, an exact route to be followed, and an arrival time during which the aircraft can be accommodated at its destination.

With this information, the pilot departs as nearly on time as possible and adheres to his flight plan insofar as he is reasonably able to do so. His navigation equipment constantly provides him with his three-dimensional position as well as the magnitude of any deviation from his desired course. As soon as the aircraft is airborne its traffic control equipment is interrogated from the ground and continuously informs the ground controller of its identity and its three-dimensional position.

The most important function of the traffic control equipment is to inform the pilot and the ground when a danger of collision between two aircraft exists. Under the control plan, each aircraft is allocated a certain volume of inviolable airspace in which to proceed, and in the event of intrusion by some other aircraft, the two affected aircraft as well as the

ground controller are warned, and the necessary instructions are issued by the ground to eliminate the unsafe condition.

By providing different equipment for navigation and traffic control, the airspace occupancy or safety system is thus able to override any failure or inaccuracies appearing in the navigation system. An aircraft which does not have complete navigation equipment may not be able to reach its destination in the least possible time, but it, as well as all other aircraft, will be safeguarded against collision.

During the progress of the flight, the pilot may find that unexpected conditions make it impossible or inadvisable for him to make good the arrival time he was assigned prior to departure. In this event he can direct a radio message to his destination and obtain a new time assignment or he can wait until he arrives at the boundary of the terminal area where he will be resequenced to land at the next open landing interval.

Within the terminal area or on fully equipped airways he will have additional help in making good his arrival time through simple indications in the cockpit which will advise him to increase speed, decrease speed, hold, proceed, etc. These indications will be computed automatically by the ground based air traffic control equipment and will be sent to the aircraft continuously. If the aircraft is equipped with complete navigation gear, the pilot also will have a pictorial situation display which will give him the traffic condition in his vicinity at all times.

## Complete Information

As the aircraft approaches the airport, its navigation equipment provides information for the execution of the approach and landing.

The ground controller is provided with a complete display of the traffic situation at all times. If an unsafe condition develops, he is aware of it instantly and can initiate various actions to correct the condition.

It will be many years before the United States can have an automatic traffic control system such as the one described above.

The report recommends that a steering committee including representation of all users of the airspace be formed to coordinate the development and installation programs of both the interim and the target systems.

On Mar. 9, 1948 the Air Coordinating Committee authorized the establishment of such a steering committee, and thus took the first of many steps necessary in the implementation of this program.—By The Aero Analyst.



**B**AFFLED AND BEWILDERED, a man in Delta's ticket office in Atlanta tried with gestures and a strange language to explain his travel problem. Amateur linguists tossed Spanish, French, Swedish, Dutch and Italian phrases at him without response.

Then a Delta ticket girl had him write his name. She dialed the first phone number listed under that name and waved the passenger to an extension. It turned out he was Greek, for the man who answered the phone luckily spoke both English and Greek. A three-way conference and the traveler was soon on a Deltaliner flying to Miami.



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\*Greek for "get there quickly"  
— which Delta does.



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## OPERATIONS-MAINTENANCE

### 30 HOUR CHECK

By DAVID SHAW

**C**AME ACROSS a report the other day from down in Chile where Linea Aerea Nacional has placed its first Martin 2-0-2 in scheduled service between Santiago, Buenos Aires and Antofagasta. Some comments in the report are worth excerpting:

"LAN has crossed the Andes 74 times with only one 2-0-2 in less than four months . . . utilization has been about eight hours a day . . . remarkable since they do no night flying and seldom fly on Sunday.

"LAN is crossing the Andes at 26,000 feet over the highest peaks and the weather. There is no other ship but a converted Lancaster down here which can maintain cruising flight at 26,000 feet.

"We flew into and out of a 3000 foot dirt field and had no trouble despite extreme roughness which would interfere with the instruments on other planes. Our take off run at 39,900 pounds appeared to be shorter than the run used by a DC-3 operating at the same time. We cruised at only 45% power and kept up with a DC-4 which was using normal cruising power of 62%.

"The (LAN) ship when it arrived in Santiago had flown that day a total of approximately 3150 miles. At the existing rate of 10 cents per passenger mile it had earned in one day .10 x 36 x 3150 or \$11,340. They are running at maximum capacity on every trip and the range is sufficient to carry full payload. Their cost of operation is very little more, if any, than a DC-3 per mile.

"There are some humorous things down here as well as the serious problems. For example, the crew members use the fire warning lights in a similar manner to a slot machine. They each pick a light at the beginning of the trip and the fellow's light which goes on first wins the pool. The runner up also gets a slice on the second indication."

Miami International Airport is getting a new control tower. This development may not be of nationwide significance, but it is mighty good news to the fellows who control traffic down there. The old tower, at a field where they build hurricane-proof hangars, was not even zephyr-proof. In a moderate breeze it tended to lean uncomfortably, and under conditions which could be termed actually windy or gusty the personnel were hard put to keep their minds on their work. The new tower project got under way, we are told, one windy day (but not windy enough to interfere with aircraft operations) when all tower personnel fled to safety and let the traffic look out for itself for a couple of hours.

## OPERATIONS

### PCA, NAL Interchange

An agreement for equipment and flight crew interchange at Washington, D. C., has been filed for CAB approval by National Airlines and Capital Airlines. While operating details remain to be worked out, revenues are to be divided according to per mile expenses, including direct flight costs, indirect maintenance, hostess' salaries, and general overhead. Excess revenue after expenses is to be divided 45% to lessor and 55% to lessee of aircraft involved. A joint advertising program is planned.

### Minimums Raised

In an effort to provide increased safety in air carrier operations, the Civil Aeronautics Board has amended Part 61 of the Civil Air Regulations to raise, with certain exceptions, the present minimum instrument altitudes over mountainous terrain from 1,000 to 2,000 feet, the minimum night VFR altitudes in unlighted areas over mountain terrain from 1,000 to 2,000 feet, and the minimum day VFR altitudes from 500 to 1,000 feet.

Air carrier accidents in which aircraft have failed to clear the terrain, the CAB said, have clearly pointed to the need for raising the minimum enroute altitudes in areas where miscalculations, altimeter errors or unusual weather conditions may result in insufficient terrain clearance.

### Fuel Transfer Barred

Because of the hazards involved, the transfer of fuel between tanks on DC-4's and C-54's has been prohibited by a CAA Airworthiness Directive. By April 15 the following placard must be installed in the cockpit: "Fuel cross-feed system not intended for transferring fuel from one tank to another and should not be used for this purpose. When using cross-feed system, turn off tank(s) not in use." CAA-approved Flight Manual must be revised accordingly.

## GROUND SERVICES

### UAL Revises Ground Services

A new systemwide ground services organization, designed to boost dependability and regularity of operations, has been established by United Air Lines.

Under the revised setup, all ramp functions concerned with servicing, loading and getting aircraft into the air on time will be centralized under a manager of ground services at every key station.

Used quite successfully at United's Chicago station since last December, the system has been expanded to embrace the airline's entire system. Overall direction of the program has been as-

AMERICAN AVIATION

## OPERATIONS-MAINTENANCE

signed S. V. Hall, general manager of ground services.

New ground service managers appointed by Hall and J. A. Herlihy, United's vice president-operations, include: W. C. Ables at Seattle, George Taylor at Los Angeles, W. H. Thompson at San Francisco, W. H. Maxwell at New York, E. S. Maroney at Portland, W. A. Bouve at Cleveland, C. A. Sluder at Omaha and C. W. Eshleman at Denver. All formerly were station managers at these same cities.

Herlihy said each manager of ground services is being provided strong assistants to provide 24-hour direction of ramp activities by a responsible executive.

## SAFETY

### Three Dozen Steps to Safety

The air transport industry, always eager to consider any possible safety aid, was staggered recently by a 34-page report issued by Carl Dolan, aeronautical technical consultant to the Senate Commerce committee, in which some three dozen steps toward safer airline operations were proposed.

Some of the recommendations raised important international questions, several others baffled airline engineers and one brought an immediate protest from the Air Lines Pilots Association.

The proposal drawing ALPA fire was Dolan's recommendation that all pilots having major accidents be grounded for one year. David L. Behncke, ALPA president, promptly branded the idea "ridiculous in the extreme." Dolan supported the move by quoting Dr. Daniel Horn, former Air Force psychologist, to the effect that wartime pilots involved in accidents "were nearly 10 times more likely to have another one in the next 30 days than were accident-free pilots."

Many of Dolan's recommendations were regarded as sound. Most of these, however, already are subjects of serious study by both industry and government groups concerned with air safety.

Some of the proposals which raised eyebrows among airline people included: Installation of fuel dump valves in the wing tips; installation of emergency exits in both top and bottom of the fuselage; equipping all passenger planes with reversible propellers; inflating all tires with non-inflammable helium gas; improvement of vision "forward and aft"; installing portable radios and recording barographs in tail assemblies; providing devices by which engines and gas tanks can be dropped from the plane in case of fire; providing independent electrical circuits and wiring for each nacelle, and addition of an electrically lighted "Emergency Landing" sign to the "Fasten Seat Belts" and "No Smoking" signs now used.

Dolan's recommendation that all transport plane cockpits be standardized, as well as several other of his proposals, were generally regarded as desirable but

April 1, 1948

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## OPERATIONS-MAINTENANCE

economically impracticable, except for aircraft yet to be manufactured.

**Delta DC-4 Accident:** A Civil Aeronautics Board accident investigation team was still engaged last week in a study of the Delta Air Lines' DC-4 crash at Chicago Municipal Airport the night of Mar. 10. CAB officials said a hearing on the accident was planned but no date had been set.

The crash, Delta's first in scheduled passenger transportation since 1934, occurred shortly after takeoff and resulted in the death of eight passengers and the crew of four; one passenger survived. First believed to have been caused by an engaged gust lock, the accident now appears to have been the result of a more complicated set of circumstances, informed observers say.

**More Time for Sisto:** Counsel for Capt. Charles R. Sisto, pilot involved in the inverted flight of an American Airlines DC-4 over Texas last October, will have until April 2 to file exceptions to the report of CAB Safety Examiner Joseph C. Caldwell, Jr., in which it was recommended that Sisto's ticket be lifted for at least one year. Deadline for exceptions originally was Mar. 19 but was extended at the request of Sisto's counsel.

Unless exceptions are filed within the prescribed period, the examiner's initial recommendations become CAB's final decision, and Sisto's pilot certificate will be revoked.

**Heads Safety Foundation:** Jerry Lederer, veteran chief engineer for Aero Insurance Underwriters, has been elected president of the Flight Safety Foundation, non-profit organization of New York dedicated to greater air safety through scientific study, research, experimentation, and education in fields of design, equipment and practice. A schedule of planned operations of the Foundation will be released shortly.

**KLM Award:** For the fifth consecutive year, KLM Royal Dutch Airlines' West Indies Division has been awarded the Inter-American Safety Council's annual Aviation Award. In addition, KLM also won the Council's Five Years Special Award for operating from 1943 until the end of 1947 without an accident.

### NEW EQUIPMENT

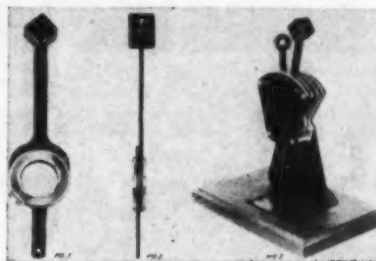
#### New Type Lock Nut

A newly patented lock nut with replaceable locking unit suitable for use with either fiber or metal washers has been announced by Sam Bloomfield, chief engineer and president of Swallow Airplane Co., Wichita, Kans. Full holding strength of the nut is restored by replacing only the locking unit retained in the crown of the nut. Such replacement requires no tools and cost of the locking unit is only a fraction of that for the entire nut, thus providing a

two-way saving for the user, the inventor says.

#### Self-Locking Controls

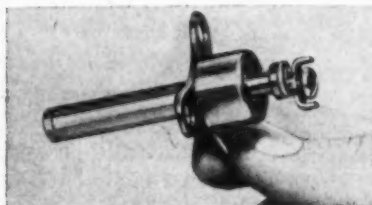
A new design for aircraft self-locking controls has been introduced by the Lynn Co., 800 S. Flower St., Burbank,



Calif. The original throttle control (Fig. 1) is designed to overcome tendency of control lever to "creep" due to vibration of the aircraft. Locking feature does not increase load on the control knob. Unit fits on all standard aircraft quadrant hubs and is no thicker (Fig. 2) than conventional throttle control lever assemblies. New control adaptable to all types of aircraft, may be incorporated in standard brackets and combined with mixture control levers as in Fig. 3. Self-locking feature may be utilized in other control installations where vibration induces changes in settings.

#### Fire Detector

Control Products, Inc., 306 Sussex St., Harrison, N. J., has introduced a new fire detector for aircraft use. The CPI



detector operates a fire alarm signal at a preset temperature and under test has proved capable of actuating the alarm considerably under the five-second time limit when exposed to a direct flame of 2,000 degrees F. The unit indicated fire out equally fast. Detector is less than three inches long and weighs about 1 oz.

#### Portable Power Units

Motor Generator Corp., Troy, O., has announced a new line of portable D. C. power units for hangar and apron service. Units are designed for use to start engines, check out aircraft electrical systems and to operate radio and electronic equipment. Motor-generator is a single unit with both the A. C. rotor and D. C. armature assembled on a solid shaft. Insulating compound protects all windings from moisture, dirt and oil.

## SAFETY SLANTS

**THE FIRST** meeting of the National Fire Protection Association's Committee on Aviation and Airport Fire Protection in over a year was held at the Wings Club in New York on March 15th and 16th. Since much of the Committee activities had been previously conducted by mail, this meeting afforded an opportunity to resolve many points on which there have been differences of opinion. As a result, some entirely new concepts for standards for fire safety have been developed.

One of the most important actions at the meeting was adoption of the basic premise that requirements for airport crash protection equipment should not be stated in terms of "major" and "small" units with descriptions and specifications for each of these vehicle types, but rather in minimum total quantities of extinguishing agent and of minimum discharge rates in gallons of water and pounds of carbon dioxide.

Performance specifications for crash trucks in terms of cruising speed, acceleration, braking ability and flotation requirements were also established. The extinguishing capacity could then be carried by one or more vehicles, depending on practical considerations.

According to this plan, airports would be divided into six categories ranging from small fields serving small craft of less than 3500 lbs. gross to super-airports capable of handling giants of over 130,000 lbs. A revision of the Association's recommendations on this matter is to be prepared and circulated to the committee for comment and approval.

*Falls, falls and more falls plague airline employee safety records. A mechanic descending from a plane on a baggage conveyor leaped over the side of the conveyor, tripped and suffered fractures of both elbows. A cabin cleaner at another field used a straight ladder to enter the cockpit of a plane. The ladder slipped and he broke an ankle. Proper step-type stands were available nearby. If you asked either of these men now, they would agree that the interest rate on that couple of seconds or minutes that they saved is pretty high.*

Too much emphasis cannot be placed on the necessity for keeping clear aisles along the walls of hangars for access to fire equipment in an emergency and to provide safe passageways for necessary pedestrian and vehicular traffic. Supply carts and other units will get into much less trouble if they have a clear thoroughfare, while marked, clear aisles will channel such traffic out of harm's way.

AMERICAN AVIATION

## Airport Convention Month

Airport operators and officials from all sections of the country will get together at two important meetings this week and next to review and ponder the many policies and problems involved in the development and operation of an airport, and particularly how to do so at a profit in the face of sharply rising costs.

The recently organized Airport Operators Council, comprised of public and governmental operators whose airports handle at least 1% of the totaled scheduled air carrier movements of the country, was to hold its first annual meeting April 1-3 at the Copley-Plaza Hotel in Boston, while the larger and more comprehensive American Association of Airport Executives was to hold forth in annual convention at Chicago's Congress Hotel April 4-8. A supplementary attraction at the latter affair will be the second annual showing of the American Airport Exposition.

The Boston sessions were of particular import because of the increasing size, costliness and complexity of modern air terminals. Among the subjects on the agenda were: development of non-flight revenues; gasoline storage and distribution at airports; ground transportation of air passengers and cargo; airport operating procedures and practices; airport administrative practices; postal operations at airports; Federal regulations applying to airports, and relations with scheduled air carriers and non-scheduled and contract operators.

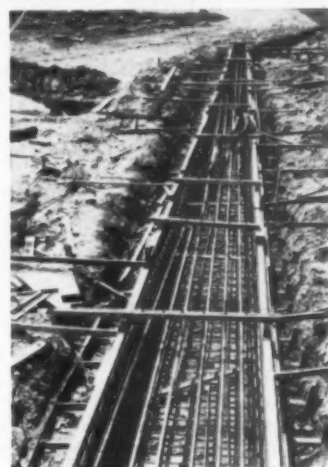
Scheduled for discussions on these subjects were a number of authoritative speakers, including: Paul Aiken, Second Assistant Postmaster General; Ralph S. Damon, president of American Airlines; George Burgess, CAA Deputy Administrator; H. Arthur Hook, assistant administrator for airports; George E. Gardner, president of Northeast Airlines; John Groves, manager of the N. Y. Operations Office of the Air Transport Association; Robert Ramspeck, executive vice president of the ATA, and John P. Carey, president of Airline Ground Transportation, Inc.

## CAA Changes the Rules

The slow pace at which the Federal aid airport program has progressed has been attributed by some critics to the mass of red tape encompassed in the regulations under which the program is administered. These regulations, it was learned last fortnight, are finally to get a long-due overhaul.

Under the heading of simplification, eight of the numerous forms project sponsors now are required to fill out will be completely eliminated, as of May 1, and two of the major forms—the project application and the sponsors' assurance agreement—will be combined.

As helpful as these simplification steps would be, however, they were viewed



**Snow Melter**—A snow-melting system said to be first of any kind installed at an airport, has been constructed by the entryway of a large new hangar for American Airlines at Chicago. A system of wrought iron pipes, embedded in the pavement beneath doors of the hangar, carries hot water, with anti-freeze added, to keep the surface temperature above the freezing level. A strip seven feet wide and 514 feet long thus remains clear of snow and ice throughout the winter months so that aircraft may enter and leave the hangar easily regardless of weather conditions.

as being of far less import than some changes in the regulations.

A major change is a provision permitting operators of Federal-aid airports to let exclusive contracts for the sale of gasoline and oil, repair of aircraft and sale of aircraft parts and equipment. This change had been long opposed by fixed-base operators, certificated and noncertificated airlines, but the Civil Aeronautics Administration finally yielded to strong pressure from would-be project sponsors who felt they should have the right to let such exclusive contracts when it would be to their best interests to do so.

There will be some strings attached to the exclusive-contract provision, however. An operator at a field built with Federal-aid funds will be permitted to furnish his own gas and oil, even though an exclusive right has been granted by the contractor. The sponsor may require, though, that aviation fuel purchased off the airport shall be stored in specific places on the airport, and that operators furnishing their own gas shall utilize such storage, dispensing and delivery facilities as the airport sponsor may designate.

Under the provision allowing exclusive rights for repair and sale of aircraft equipment, companies operating from a Federal-aid airport may repair and furnish parts for their own aircraft, and the sponsor may require the holder of

an exclusive contract to give "prompt, adequate and efficient service on a fair, equal and non-discriminatory basis and at fair and reasonable prices to all users."

Another important change in the regulations is a provision permitting sponsors to let contracts for construction without competitive bidding, subject to advance approval of the Administrator of Civil Aeronautics.

Although the changes were adopted only after numerous private conferences, public hearings and careful drafting and redrafting, the CAA was hardly hopeful that they would be greeted with unanimous approval. Nothing they had ever done in the past had been so greeted.

## Reliability vs. Convenience

Although people of Akron didn't think much of having to go 11 miles to reach the nearest airline service point at Canton-Akron Memorial Airport (County Field), the greater safety margins and more reliable service that can be maintained there make the longer surface trip worthwhile, the Civil Aeronautics Board told them in dismissing the City of Akron's protest against discontinuance of service to Akron Municipal Airport.

In approving plans of American Airlines, Capital, Eastern, and United to serve Akron through the Canton facility, CAB pointed out that Akron Municipal is situated in a shallow valley which inhibits the drainage of ground fog and smoke, and has numerous nearby obstacles making it doubtful that an instrument landing system could be established there.

CAB reminded Akronites that the greater proximity of their Municipal Airport (3.4 miles from center of the city, as against 11 miles to Memorial) would be of little value when the field was closed because of stringent weather minimums. Thus greater schedule reliability was ruled of at least equal importance with the need for expedited surface transport.

It was held "unfortunate" that many early airports were developed in locations unsuitable to present day transport needs, but the unanimous decision explained: "Although the authorization of the proposed transfer would seem to penalize a pioneer, the present and growing needs of the public are controlling and the transfer must be approved unless we find that the public interest now and in the future will be adversely affected thereby."

Elimination of all gross weight restrictions, possible through use of the newer airport, was cited as an important economic advantage for the airlines.

## Better Management Needed

For operators of public airports, with a few notable exceptions, the struggle to keep revenues equal to or above the operating and maintenance costs has long been a losing one. Last month, W. F.



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### AIR TERMINALS

Schmidt, superintendent of airports for the Sixth CAA Region, suggested that perhaps the operators themselves were to blame for their fiscal difficulties.

Addressing a conference of airport managers and officials at Iowa City, Schmidt put the matter bluntly: "We have too many persons either managing airports or dominating their management who aren't grounded in business fundamentals and who are not even casually acquainted with the principles of government, its economics, and the politics which make it tick. No airport, except the most exclusive private club, can be run for the sole benefit of the local fly-boys."

His prediction: contract property management firms can be expected to enter the airport management field unless there are sharp reversals in present airport management practices.

### FIDO for Next Winter

Chances now are reported good for installation of Los Angeles Airport's long-delayed FIDO system in time for next winter's operations. Cost increases and revision of plans have boosted estimated costs from about \$650,000 to \$837,350, of which the CAA's share is 54.07%.

The Los Angeles City Council has agreed to lend \$386,891 to the airport board to cover municipality's share of the expense. The city, however, will get this back from the airlines which have agreed to make monthly reimbursing payments over a five-year period. Airline payments will be prorated on the number of regular flights operated at the terminal rather on the number of times FIDO is utilized. Airlines also will pay operating and maintenance costs of system.

### U. S. Buses Favored Abroad

Not only are air travelers in foreign lands displaying a growing preference for American transport planes, but they also are beginning to favor American-built buses for transportation to and from airports.

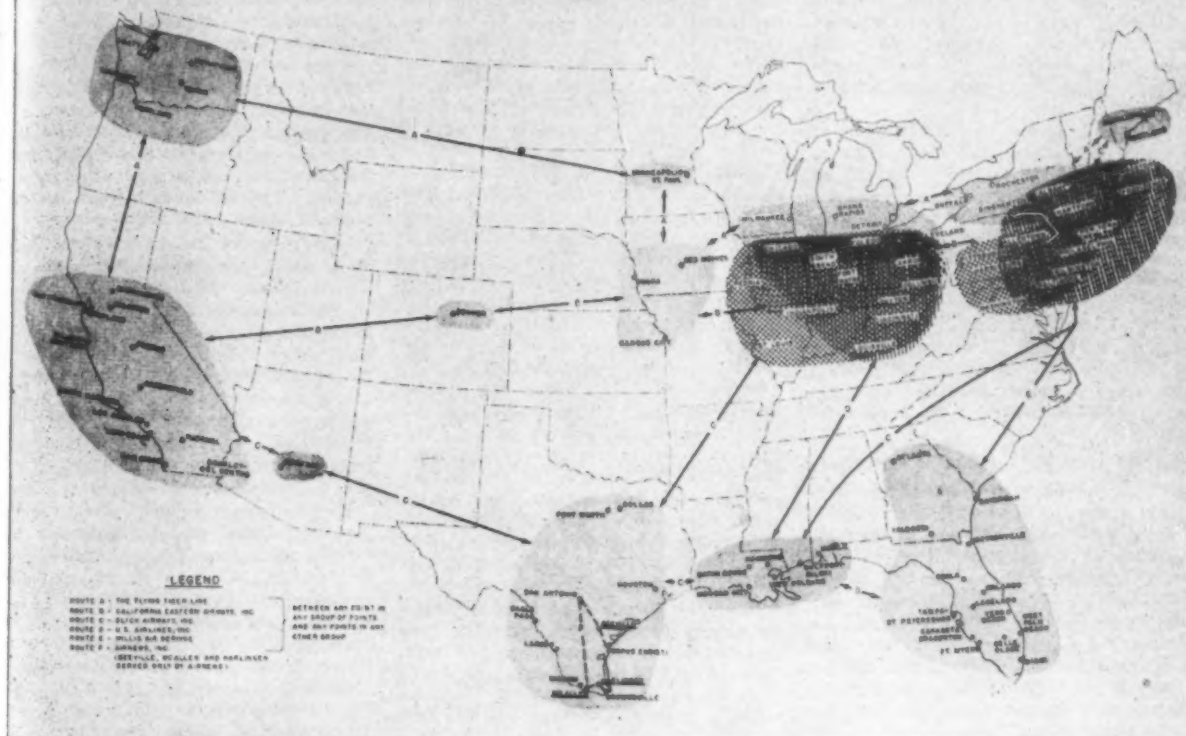
The White Motor Co., of Cleveland, an important producer of motor trucks and busses, reports an increasing export business, including a recent shipment of five large buses for use by KLM Royal Dutch Airlines. Four went to the Dutch West Indies, the other to Singapore.

### Heads St. Louis Air Council

Maj. Gen. Leif J. Sverdrup, consulting engineer and formerly commanding general of the Engineer Construction Command in the Pacific area, where he laid out air transport routes and airport facilities, has been named president of the Aviation Council of Metropolitan St. Louis, Inc., succeeding George B. Logan.

AMERICAN AVIATION

AIR FREIGHT CASE  
DOCKET NO. 810 ET AL  
RECOMMENDED SERVICES



## Report Favors 6 Cargo Lines

In the bitterly-contested struggle between the cargo airlines seeking certificated common carrier status and the presently certificated carriers battling to head off such competition, the first round went to the challengers.

The long-awaited examiners' report in the Air Freight Case finally was issued Mar. 12, more than 13 months after the hearings had ended. The recommendations of Examiners William F. Cusick and R. Vernon Radcliffe, if adopted by CAB, would blanket the U. S. with exclusive air cargo services.

Their major finding: the air freight potential within the continental United States is so encouraging that certification of additional all-cargo carriers, at least on a temporary or experimental basis, appears warranted.

Their principal recommendation: that six presently noncertificated operators be awarded all-cargo certificates valid for a three-year period.

The favored carriers, chosen from among 14 applicants, were: Slick Airways, Inc., The Flying Tiger Line, Inc., and California Eastern Airways, Inc., each for a transcontinental service; U. S. Airlines, Inc., and Willis Air Service, Inc., each for a north-south route; and Airnews, Inc., of San Antonio, for a specialized combination plane-truck

newspaper delivery route in Texas.

The examiners recommended dismissal of all other applications, including that of one presently certificated carrier, Capital Airlines, whose proposed transcontinental cargo operation was rejected because it "shows little promise of adding anything of value to the experiment."

**Flexible Route Patterns.** The recommended route awards represented a variation on the "area-to-area" type of service proposed in some of the applications. The examiners found that while CAB lacked specific authority to authorize a carrier to engage in an area-to-area rather than a point-to-point operation, this prohibition could be bypassed in effect by the issuance of flexible route certificates indicating terminal and intermediate points and permitting the latter to be served on a "demand" basis.

In general, it was recommended that each carrier be authorized to carry cargo between any point in a given group of points or area and any points in certain other groups or areas, but that restrictions be included to prohibit carriage of traffic between any two or more points in the same group of points.

Likening the need for an experimental air cargo service to that upon which the temporary feederline certificates has

been based, Cusick and Radcliffe expressed belief that such an experiment shows promise of greater economies in operations, administration and customer contact than would be possible for airlines handling mail, passengers and express as well, assuming a proper degree of overall managerial efficiency on the part of the all-cargo carriers.

Many complex questions were involved in the Air Freight Case. To arrive at what they considered to be fair and reasonable answers to these questions, the two examiners waded through 5,000 pages of testimony, plus reams of exhibits, traffic charts and economic graphs. Their examination of these questions and the resultant findings and recommendations took up nearly 350 mimeographed pages in two volumes.

**Competitive Coverage.** One basic question was "whether or not there exists a sufficient traffic potential to warrant the introduction of additional carriers to satisfy the air transportation demands of the public."

While conceding that forecasts of air freight potentials involved "numerous imponderables," the examiners found that testimony furnished "an impressive indication that the services and rates offered by the (noncertificated) applicants are meeting an industry need for rapid movement of property, particularly for overnight delivery . . ."

The examiners took the view that the rate of realization of the nation's air

## AIR CARGO

freight potential can only be determined by competitive coverage, technological advances, and the aggressiveness of the entrants in the field.

Regarding diversion from existing certificated airlines, the report explained that each airline intervener had maintained that duplication by an all-cargo carrier would divert traffic and increase its mail pay needs.

"Facts of record do not appear to support this allegation," the examiners declared. "Air freight traffic carried by the certificated carriers has been developed in the face of strong competition from any of the applicants herein."

It was concluded that inasmuch as nearly all the companies tentatively selected had already accumulated two years' experience in non-certificated operations, an additional three-year period under CAB certification should provide five years of experimentation "sufficient to measure the worth of the service."

### AF to Lease Cargo Planes

U. S. Air Force's Air Materiel Command at Wright Field, O., has announced immediate leasing of a "substantial" number of C-46F cargo planes to commercial airlines. Planes will be offered, officials said, to all established air carriers at a rate of \$300 per month per plane. The C-46F was the latest model Curtiss Commando delivered to the Air Force, in the closing stages of the war. Ten days after the offer, AMC had not yet announced a "taker."

### SALES PROMOTION

#### Ham & Egg Special

For American Overseas Airlines it was a smart piece of cargo sales promotion, but to hundreds of families in the British Isles who sat down last week to breakfasts of rare ham and eggs the airline's Friendship Flights were almost an Easter miracle.

The idea first occurred to American's international cargo sales division last fall as a potential means of utilizing unused cargo space during the slack winter travel season. It caught on so well that approximately 100,000 pounds of perishable foods—meat, eggs and dairy products—have left New York and Boston on 12 AOA Friendship Flights since last Nov. 30.

It is a cooperative project in which the airline has enlisted the aid of several food processors and six large department stores in five U. S. cities and Toronto, Canada. The aim, in which the Friendship Flights have been successful, is to enable friends, relatives and sympathizers to have packages of highly prized fresh foods delivered overseas at reasonable cost in a matter of 24 to 48 hours.

Prices of the packages, ranging from \$4 to \$15, include cost of the food, complete insurance coverage, air express charges, and delivery to the addressee's home. Contents are practical, wanted

foods—ham, eggs, bacon, butter, lard, flour, etc.—with no delicacies or fancy items included. To supply worthwhile packages at a minimum cost, several food processors, among them Hormel, Rath and Hygrade, agreed to reduce their prices, the department stores reduced their usual mark-ups, and the airline obtained approval for a 50c-per-pound commodity rate from New York to Great Britain, compared to a regular tariff of \$1.17.

**Stores Advertise.** The department stores themselves worked out standard packages and advertised the service extensively. Jordan March, of Boston, which sponsored five Friendship Flights, had one package costing \$14.75, including transportation and delivery to the British Isles, which consisted of a 7-pound ham, equal to 40 weeks of meat ration for one person in Britain. No ration points were required, no duty had to be paid.

In addition to Jordan March, the stores cooperating in the project were Woodward and Lothrop in Washington, and Simpson's in Toronto, each sponsoring two Friendship Flights; John Wanamaker in New York and Philadelphia, and the Farmers' Market in Los Angeles, one each.

From the customer point of view, the Friendship Flights were savers of time and trouble. There was no red tape. Orders could be telephoned to the stores, paid by check or charged to the customer's account, and that was the end of it.

All the Friendship Flights out of New York and Boston went to Great Britain only, but the ones out of Washington went to England, Scotland, Wales, Northern Ireland, France, Belgium, The Netherlands and Italy. Other flights to these countries may be arranged later.

### PAA Promotes Air Cargo

Air Cargo, Inc., had been trying for several months—and with only a modicum of success—to persuade its 19 airline members to stop using the terms "air express" and "air freight" and use instead the term "air cargo" when referring to property carried by air. Last month ACI got a pleasant surprise when the cargo designation got its biggest plug yet from Pan American Airways—a non-member.

The assist came as a result of PAA's cancellation of its contract with Railway Express Agency, which had long acted as its forwarding agent in the development and pickup and delivery of air express shipments between this country and route points on Pan Am's far-flung system network. PAA, American Overseas Airlines and several other international carriers had canceled their REA contracts Mar. 1 because they were not in conformance with policy of the International Air Transport Association.

Pan American, because of its position in international flying, had been accustomed to heavy overseas shipments

through REA. Last year, for example, it flew more than 24 million ton miles of air express. But with REA out of the picture and competition from other carriers for this business on the increase, PAA saw it would have to promote air cargo vigorously to maintain its former volume.

The International Transport Association had been lining up cargo agents in key cities throughout this country and Canada to perform for its members substantially the same services formerly rendered by REA, and by Mar. 1 it had a list of about 150 such agents.

Pan American designated these firms as its agents and embarked upon an extensive sales promotion effort built around the catch term "Clipper Cargo." Its next step was to distribute to some 2,200 selected shippers a comprehensive 30-page Clipper Cargo Memorandum Tariff containing rates, charges, documentary requirements, and rules and regulations applicable for shipments between international gateway airports in the U. S. and points served.

It called attention, in this book to the fact that REA was no longer a receiving agent for PAA Clipper Cargo and that shippers now would need only to call PAA's cargo department, their own shipping agent or any of the 150 agents listed. For convenience, it listed these agents and their addresses and topped things off by listing domestic air freight carriers with whom it had agreements to act as receiving agents for Clipper Cargo and the principal shipping points served by these carriers. All of this was followed up by a series of advertisements in newspapers in international gateway cities.

### TARIFF

#### Slick Pickup Tariff

Air Cargo, Inc., representing 19 certificated airlines, has been working steadily toward an air cargo tariff which would include pickup and delivery service, but Slick Airways is first to file such a tariff.

New tariffs filed by Slick with the Civil Aeronautics Board on Mar. 22 increased rates an average of 1.5 cents a ton mile but added the new and highly desirable feature of door-to-door delivery service.

Slick's previous rate, adopted when the line attained common carrier status last August 1, had averaged slightly less than 13c per ton mile. This low rate not only had failed to provide the company with income sufficient to keep pace with increasing costs of operation but has also done little to correct the lack of balance in the directional flow of traffic. The new tariff, averaging 14½c a ton mile, was designed to counteract both these deficiencies through upward and downward revisions in various weight categories and on certain commodities flown between certain points.

AMERICAN AVIATION

## Feeders Join Sales Effort

Consolidation of the traffic and sales departments of two completely separate airlines was effected for the first time this month by two certificated feeder-lines—Monarch and Challenger. Gerald S. Kitchen, general traffic and sales manager of Monarch, heads the combined departments.

Kitchen, a veteran of 19 years in rail and air transportation in western states, will coordinate, supervise and direct the traffic and sales functions of the two carriers at the administrative level. Under him are all station operations, traffic, sales, schedules, tariffs, ticketing, interline agreements, sales promotions, passenger services, express, mail and freight.

In addition to the economies and increased efficiency apparent in the consolidation, it is expected that the general services of the two companies will be more closely integrated.

There is a considerable "community of interest" between the areas served by the two carriers, Monarch serving 16 cities in New Mexico, Colorado and Utah, while Challenger provides air service to 19 communities in Utah, Wyoming and Colorado.

The head of the combined departments was affiliated with the Union Pacific Railroad until 1941, when he joined Continental Air Lines at Denver as director of travel and tours, later assuming additional duties as assistant director of cargo sales. He resigned from Continental 15 months ago to become general traffic and sales manager for Monarch.

## Executives Pay Off

West Coast Airlines employees at Bellingham, Wash., had the day off on Tuesday, Mar. 23, but most of them went to the airport to watch the fun as the airline's top executives manned the station for a full day as payment to the station personnel for winning a sales contest.

They watched Gilt-rt Cook, administrative vice president of the company, load baggage on a plane, and observed Robert England, general manager of traffic and sales, in the act of placating a slightly nettled passenger. To Ernie Code, operations manager, fell the job of sweeping the office at the close of the day, and Herbert Munter, executive vice president, found out how harassing telephone calls can become in a ticket office.

Bellingham had won the contest by showing the greatest percentage increase in sales among all West Coast Airlines stations for the month of February over January. Its increase was 99.5%. Second, third and fourth places went to Everett, Chelalis-Centralia and Astoria, respectively, but only the Bellingham personnel enjoyed the privilege of watching the "top brass" of the company do their work for a day.



Gerald S. Kitchen  
Heads Combined Departments

At the end of the day, the company officials entertained the station employees and their wives at a dinner. Everyone had a good time.

## AGENCIES

### PIA Raises Commissions

In a move to stimulate traffic and level off the usual seasonal drop in south-bound volume, Peruvian International Airlines on Mar. 8 increased its agency commission from 7½% to 10%, and the advertised, conducted tour commission from 10% to 12½%. The new discount does not apply on local business between Washington, New York, and Montreal (company expects to begin Montreal service in near future).

The airline reports that the higher commission brought immediate enthusiastic response from its agents, upon whom the company relies for between two-thirds and three-fourths of its passenger business.

Colonial Airlines has appointed Simmons-Gateway Tours as agency representative for the Boston and Philadelphia territories. The Simmons-Gateway organization will service travel agents on the same basis as if Colonial offices were located in the two areas. Both the airline and the tour firm will deal only with travel agents, and not with the general public.

## TOURS

### C&S Offers Havana Cruises

New low cruise rates aimed at the pocketbook of men and women with incomes in the \$150-\$300 monthly bracket have been announced by Chicago and Southern Air Lines in connection with its all-expense summer cruises to

Havana. The rates are effective April 1.

Typical cruises, including round-trip air fare, hotel, and meals in Havana for five days and six nights range from \$139.20 from New Orleans to \$179.90 from Chicago. The cruises are available also, at intermediate rates, from the following C & S route points: Beaumont, Detroit, El Dorado, Evansville, Fort Wayne, Greenwood, Hot Springs, Houston, Indianapolis, Jackson (Miss.), Little Rock, Memphis, Paducah, Peoria, Port Arthur, St. Louis, Shreveport, Terre Haute and Toledo.

The basic air cruise consists of five days and six nights at either the Hotel Vedado or Hotel Ambos Mundos. Another cruise of similar length is available to the Hotel Nacional, as well as longer cruises, some with extra days to be spent at Varadero Beach.

## TWA Books Record Tours

Trans World Airline, with seat reservations covering 1,064 trans-Atlantic round-trips booked by travel agents during the first 10 weeks of the year, was feeling confident last week that a new record in North Atlantic air travel would be set during 1948.

The reservations mentioned above were for seats on 59 tours, beginning in March and extending through September, and Edward S. Sullivan, TWA's manager of agency and interline, trans-continental division, pointed out that normally the heaviest international air travel is not booked until April, May and June, for tours to be made in July and August.

Sullivan said TWA didn't have more than a fourth as much international business booked at the same time last year.

LAMSA, Mexican subsidiary of United Air Lines, has inaugurated once-a-week service from Juarez, across the border from El Paso, to Guaymas, deep-sea fishing center and resort on the west coast of Mexico. Flights, taking two hours 10 minutes, will leave Juarez on Friday afternoon and return next morning until the fishing season ends in June.

## TICKETING

Braniff Airways has completed arrangements for a single system of ticketing for round-the-world passengers and international air cargo. Involved is a multilateral agreement with members of International Air Transport Association and separate pacts with other foreign carriers. Thirty-two airlines of other nations have signed the agreement to date.

Peruvian International Airways has signed an interline agreement with the Pennsylvania Railroad whereby the latter will honor PIA's tickets for mass movement of passengers between New York and Washington.

## TWA Heralds DC-6 Return

There was no doubt but that the voluntary grounding by American Airlines and United Air Lines of their DC-6 aircraft had benefitted TWA—only other airline flying between East Coast metropolitan centers and California—more than any other carrier. Last week TWA showed its appreciation.

In special newspaper ads and over the radio, TWA headlined the news: "More Seats Now Available for the Flying Public. TWA Salutes the other airlines upon the return to service of their largest airplane." Continuing, TWA, which owns no DC-6's, said:

"TWA has always believed that an airline is, first of all, a public service organization. We feel that anything that is done to make flying better and safer for the public is a benefit to all the airlines. When American Airlines and United Air Lines voluntarily removed their largest equipment from operation several months ago (last Nov. 1) they did so in a spirit of public service. TWA welcomes the return of these planes."

It was a gracious gesture—and a smart piece of public relations—on behalf of TWA.

**A Frank Statement:** United Air Lines, which last fall ran large newspaper ads titled "The Facts Behind United's Withdrawal of DC-6 Flights," came back last fortnight with an equally frank sequel titled "United Air Lines reports on the resumption of DC-6 Service." After explaining how the DC-6's had been modified between the time of their voluntary grounding last fall and the return to service beginning March 21, the advertisements said: "We never have, and never will, operate any airplane that does not measure up to the highest known standards of safety and dependability. We are proud to see the DC-6 . . . come back to the Main Line Airway. We are convinced that it will, in every way, prove itself to be the outstanding airliner in operation anywhere in the world."

**New Agency:** Northeast Airlines has announced appointment of Pedlar & Ryan, 250 Park Ave., N.Y.C., as its advertising agency.

**Returns to Old:** After a seven-months interlude of a New York agency, Capital Airlines has returned to its former advertising agency, Lewis Edwin Ryan, 726 Jackson Place, Washington.

## —NEW SERVICES—

### Domestic

**Capital Airlines** has set April 8 as date for inaugurating service to Mobile and New Orleans. Date for opening of the Birmingham-Atlanta route extension will be announced shortly.

**Chesapeake Airways**, Maryland intra-state operator, which suspended its scheduled flights between Baltimore and Salisbury in late February, expected to

**it's a sunny day  
on top**



Don't let overcast skies fool you about travel. Right above is brilliant sunshine. Leave rain and clouds to those below, and travel in the sun with Delta.

Rain or shine flights to:

**CHICAGO**  
3 Hours 32 Minutes

**MIAMI**  
6 Hours 6 Minutes

**ALANTA**  
44 Minutes



Phone 2-8336  
Hotel Patten

resume operations about April 1. It also plans to establish a non-certificated air cargo service.

**Continental Air Lines** notified the P. O. Dept. it expected to inaugurate service to its new route points at Lawton and Fort Sill, Okla., on or about April 1.

**Delta Air Lines** planned to inaugurate following new services April 1: a first through one-plane service from Cincinnati to both Birmingham and New Orleans; first one-plane service from Knoxville to New Orleans; first service to Hattiesburg, Miss., on a DC-3 flight from Charleston, S. C., to New Orleans; and its first all-cargo service through New Orleans on a Chicago-Forth Worth flight.

**Eastern Air Lines** plans to inaugurate scheduled service into the New Castle County Airport, serving Wilmington, Del., on April 27.

**National Airlines** said it would soon be able to provide through one-plane service linking Florida and the southeast with the industrial area of Pennsylvania, upper New York, part of Ohio and the Great Lakes region through its interchange agreement with Capital Airlines.

**TWA** is shooting for Apr. 25 as date for inauguration of service into its newly certificated stops at Worcester, Scranton, Wilkes-Barre, Baltimore and Santa Fe.

### International

**Air France** has set April 14 as date for inaugurating service to Boston on its weekly Near East Comet flight from New York to Paris, Jerusalem and Cairo. Service to Rome will be inaugurated same day.

**Braniff Airways** has indicated plans to inaugurate service over its Latin American route early in June.

**BOAC's** new summer timetable, effective April 25, will increase New York-

London services from five to six round-trips weekly; U. S.-Bermuda service from six to seven round-trips weekly, with four out of N. Y. and three out of Baltimore; and Montreal-London schedules from two to three weekly in each direction.

**KLM Royal Dutch Airlines**, effective April 18, will inaugurate a new night flight from London to Amsterdam and Rome, plus other additional schedules out of London connecting with overnight services to the Near and Middle East. In addition, a weekly service from Amsterdam to Munich will be opened this month. A twice-weekly service to Athens and a weekly service to Istanbul, Baghdad and Teheran will be introduced in June.

**Panair do Brasil**, affiliate of Pan American Airways, on Mar. 2 extended its weekly Rio-Paris service to Frankfurt-am-Main.

**Peruvian International Airways** increased its services between New York and Washington and the West Coast of South America to four round-trips weekly on Mar. 5.

**TACA Airways** on Mar. 1 increased its New Orleans-Central American services from two to three round trips weekly, with departures from New Orleans on Mondays, Wednesdays and Fridays. The airline has suspended all of its services into the Miami gateway from Central America, and has also stopped all services into Havana. All personnel are being transferred or released at those points and all leases for space and facilities given up. The New Orleans gateway is being used exclusively.

**Trans World Airline** is now serving Basra, Iraq, with one schedule daily in each direction on its New York-Bombay route. Eastbound flights leave Basra on Thursdays, and westbound flights on Saturdays.

## Education —

To help combat the mistaken impression, held by large numbers of people, that airplanes don't fly when the weather on the ground is a bit nasty or forbidding, Delta Air Lines is running a series of newspaper ads (left) stressing the fact that "it's a sunny day on top"—above the overcast. Company hopes public will read and be educated, thinks it would help if other airlines would do something of similar nature.

## U. S. Feederline Traffic for January

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REVENUE TRAFFIC	AVAILABLE TON-MILES FLOWN	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
Challenger Empire	1,274 779	295,000 182,000	2,252,000 765,000	13.1% 23.8%	1,756 1,191	1,315 338	2,210 . . . .	34,812 16,643	181,681 61,420	19.2% 27.1%	107,218 76,500	126,418 86,149	84.8% 88.8%	
Florida Monarch	608 1,641	87,000 357,000	572,000 2,376,000	15.9% 14.9%	478 1,551	221 954	. . . . 4,687	7,943 42,912	62,598 279,749	12.7% 15.3%	71,540 131,790	78,180 153,402	91.9% 85.9%	
Pioneer Southwest	4,805 4,494	1,240,000 664,000	4,901,000 2,089,000	25.8% 28.6%	3,161 2,907	1,257 1,741	435 2,992	114,051 96,559	509,107 331,055	22.4% 29.2%	199,615 157,570	231,300 173,146	85.9% 91.0%	
Trans-Texas West Coast	774 2,312	176,000 318,000	2,551,000 1,412,000	6.9% 22.3%	1,119 973	197 568	. . . . . . . .	16,244 31,594	193,081 144,285	8.4% 21.9%	106,005 77,801	121,488 101,339	87.0% 76.8%	
TOTALS	16,667	3,528,000	17,818,000	19.8%	13,135	6,991	10,324	360,798	1,762,976	20.9%	928,039	1,071,422	86.9%	
						Helicopter Mail Service								
Los Angeles	. . . .	. . . .	. . . .	. . .	1,062	. . . .	. . . .	1,062	5,649	18.0%	15,164	17,283	85.7%	

## U. S. Feederline Traffic for Calendar 1947

AIRLINE	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REV. TRAFFIC TON-MILES	AVAILABLE TON-MILES FLOWN	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
Challenger Empire	9,983 11,518	2,409,000 2,510,000	12,764,000 9,048,000	19.9% 27.7%	13,356 15,282	7,112 4,079	8,403 .....	278,427 228,658	1,461,962 727,042	19.0% 31.9%	605,286 905,552	581,664 988,536	87.9% 91.4%	
Florida Monarch	6,805 18,079	901,000 3,916,000	5,194,000 20,171,000	17.9% 19.4%	4,085 21,131	1,963 21,988	..... 42,464	233,472 478,862	1,417,180 1,843,928	16.5% 26.0%	678,619 1,190,225	719,984 1,359,542	94.2% 87.5%	
Pioneer Southwest	62,698 83,468	16,513,000 14,964,000	51,351,000 35,958,000	32.2% 41.6%	37,145 36,040	17,842 31,295	4,418 18,348	1,511,615 1,568,104	4,209,434 3,032,214	35.9% 40.9%	2,131,412 1,802,285	2,218,172 1,940,707	95.9% 92.4%	
Trans-Texas West Coast	1,550 41,483	311,000 4,803,000	4,609,000 16,226,000	6.7% 25.6%	1,652 7,091	214 4,950	..... 109	28,762 438,577	369,559 1,635,016	7.8% 26.8%	219,491 783,603	248,372 890,699	88.4% 87.8%	
TOTALS	235,984	46,409,000	155,321,000	29.9%	135,782	89,443	65,742	4,766,477	15,496,335	30.7%	8,316,473	9,057,636	91.6%	
Los Angeles	.....	.....	.....	.....	2,533	Helicopter	Mail Service	.....	.....	2,533	13,747	27,722	38,912	94.5%
NOTE: Challenger began operations May 3, 1947. Los Angeles began operations October 1, 1947. Trans-Texas began operations October 11, 1947.														

## U. S. Feederline Traffic for December

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REV. TRAFFIC	AVAILABLE TON-MILES FLOWN	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
Challenger Empire	1,271 559	309,000 135,000	2,376,000 708,000	13.0% 19.1%	2,188 1,176	1,176 490	3,512 .....	37,765 12,895	298,993 56,858	12.6% 22.7%	113,255 70,811	126,418 85,551	89.6% 82.8%	
Florida Monarch	708 1,728	92,000 376,000	533,000 2,107,000	17.2% 17.9%	472 1,469	240 763	..... 4,212	8,334 46,305	58,361 169,383	14.9% 26.2%	66,698 117,054	70,060 151,660	95.2% 77.2%	
Pioneer Southwest	5,901 5,896	1,596,000 1,155,000	5,252,000 3,448,000	29.6% 33.3%	3,782 5,038	1,945 2,971	913 2,430	143,405 186,536	436,680 369,822	38.8% 34.2%	218,498 176,022	231,304 182,342	94.0% 95.3%	
Trans-Texas West Coast	724 2,426	151,000 327,000	1,971,000 1,628,000	7.7% 20.1%	1,093 1,337	182 788	..... 109	14,960 31,774	199,406 166,810	9.1% 19.2%	93,637 89,398	102,308 103,607	91.7% 85.8%	
TOTALS	19,213	4,099,000	18,025,000	22.7%	16,555	8,555	11,176	419,802	1,716,327	24.9%	945,573	1,053,330	89.9%	
Los Angeles	.....	.....	.....	.....	1,235	Helicopter Mail Service			1,235	5,420	22.8%	14,551	14,652	98.4%

## MCA Tells How:

# Planning Prevents Delay

Focal point in the 5-Star 10-week system-wide drive by Mid-Continent Airlines to improve its passenger service is centered on the avoidance of delays. The drive began Feb. 20.

The first starred point on the 5-Star poster is "No delay today" and the theme is "Most delays are avoidable."

The first of two Stargrams attacking the delay bugaboo points out that MCA passengers buy Time, and advises every employee to become a clock watcher.

"It is apparent," the employee bulletin points out, "both from a study of records and through experience, that many delays are the result of human failure. Many more are the result of lack of organization within the station or of neglect in following the procedures for getting the aircraft on its way."

"All the Will-to-Work, all the Knowledge-of-Your-Job that you may possess cannot then save you from what was up to that moment an AVOIDABLE DELAY. But PREVENTIVE PLANNING could have."

Henceforth on the delay reports sent to headquarters the word "unavoidable" must be substantiated by opinions and detailed facts about the delay. The committee then traces back the delay to its very root.

Reviewing briefly several steps necessary to the operation of a flight, the Stargram points out specific places where planning will prevent delays:

**1. INFORMATION FOR THE DISPATCHER**—The load message is an absolute necessity if the dispatcher is to plan intelligently the flight operation. Does the agent plan his work ahead and collect all available information as soon as possible? Is it sent to the dispatcher in time so that he can study it thoroughly before his release deadline?

**2. AIRCRAFT READY FOR RELEASE TO OPERATIONS**—Is the aircraft always fueled as soon as the fuel load is received from Operations? Is care taken not to get aircraft numbers confused? Is the aircraft always pre-flighted in time so that the co-pilot does not have to wait for it?

**3. AIRCRAFT ON THE RAMP ON TIME**—Does the co-pilot report for the aircraft in time so that he can not only "run-it-up" but, if some minor adjustment is necessary, such adjustment can be made without unduly delaying the arrival of the aircraft at the ramp?

**4. LOADING CARGO AND WORKING FORMS**—The majority of all avoidable delays originate here. Do the cargo handlers load baggage, etc., as soon as it is received. Get cargo on the aircraft and out of the way. This gives you a chance to load systematically so that each station's cargo is grouped and can be quickly unloaded.

Does the agent keep his flight form up-to-the-minute, anticipating trouble sources, checking connections, checking progress at the ticket counter, checking meal counts and pre-checking progress of meal service?

**5. HOSTESS CHECK OF CABIN**—An aircraft brought from the hangar is not always warm and comfortable. Check as soon as possible the cabin's appearance and the items necessary for the passengers' comfort. If you find something missing when passengers are aboard, it will cost a delay to get them.

**6. PASSENGER FLIGHT CHECK-IN**—Does the reservations agent ALWAYS advise the passenger that in order for the flight to operate ON TIME he should be at the ticket counter to check in at a certain time?

If the passenger is not to be ticketed by a city ticket office his full ticketing information must be obtained so that tickets can be prepared in advance by the airport ticket office.

Does the airport ticket agent have the passenger manifest made up well before the passengers start checking in, or

does he improvise as the passengers appear?

**7. FLIGHT DEPARTURE ANNOUNCEMENT**—A little PLANNING AHEAD on the part of station agent and ticket agent will solve the problem of short irritating passenger delays because of flight departure announcements. A last minute passenger should present no special problem at the counter. Call the flight and then check in the late-corner.

**8. FLIGHT DISPATCHES**—Especially in small stations, the dispatches can be ready for transmission almost as soon as the flight taxis from the ramp by the simple procedure of making up the dispatches as you make each entry on the flight forms. To be sure these entries are correct is important and requires only a moment or two spent in double checking. Two minutes spent double checking a dispatch is a small price to pay for an ON TIME departure at the next station.

Each of the five starred points are being developed in similar manner as the campaign progresses.

Western Air Lines has consolidated its stewardess and food and supply service departments into one department known as In-Flight Service Dept. P. E. Pearce, former station coordinator, southern division, is in charge.



**New Loading Look**—Keeping up with the "new look" for ladies, United Air Lines engineers have re-designed the step arrangement on company's loading stands, placing four steps of moderate height in space where three were before. Also, hand rails have been extended. View on left shows the strain placed on the new-style longer and tighter skirts by loading stands now in use. The new look in loading is demonstrated on the right. UAL plans to modify all loading stands for its four-engined equipment.

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## FOR SALE By AMERICAN AIRLINES, INC.

43-02 Ditmars Blvd.  
ASTORIA, L. I., NEW YORK

- Douglas DC-3 Airplane Parts, Acces-  
sories and Ground Equipment
- Wright G-102 (C9GB, R-1820) Engine  
Parts, Accessories and Components
- P&W R-1830-92 Engine Parts, Acces-  
sories and Components

### ALSO

- Douglas DC-4 Airplane Parts and  
Accessories and Ground Equipment
- P&W R-2000-13 Engine Parts, Acces-  
sories and Components (many of  
which are interchangeable with R-  
2000-7-9-11 Engines).

These inventories are available for in-  
spection at our warehouses at Astoria,  
L. I., New York, Tulsa, Oklahoma and  
Fort Worth, Texas, and offered F.O.B.  
these points for domestic shipment at  
very attractive prices.

Prompt attention will be given to all  
requests for quotations directed to the  
attention of the Director of Surplus  
Sales at the above address. Write,  
Telegraph or Telephone (Ravenswood  
5-1000).

## Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications \$1.00 a line, minimum charge \$4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1317 F Street N. W., Washington 4, D. C.

### POSITIONS WANTED

Airline Captain desires position as private pilot, individual or company. NATS and major airlines experience; 4436 total hours; 2900 hours multi-eng., DC-4, DC-3, Lodestars; 2½ years aeronautical engineering. Age 28; married. Box No. 611, AMERICAN AVIATION, 1317 F Street, N.W., Washington 4, D. C.

### AIRPORT MANAGEMENT OPERATIONS SALES — SALES PROMOTION AERO. SAFETY ENGINEER

Airport Manager, thoroughly experienced in operation of large terminal airport, desires more active assignment in one of above fields. Location optional. Box No. 605, American Aviation, 1317 F St., N. W., Wash-  
ington 4, D. C.

TWO AIRLINE CAPTAINS presently flying scheduled international airline, DC-3, DC-4, Constellation transoceanic experience, desire positions in smaller, more personal type of operation, foreign or domestic. Box No. 608, AMERICAN AVIATION, 1317 F St., N. W., Washington 4, D. C.

### FOR SALE

All remaining assets of CARGO AIR-  
LINES, INC. available for purchase. Box  
No. 607, AMERICAN AVIATION, 1317 F  
St., N. W., Washington 4, D. C.

### HELP WANTED

Aviation Director for trade-civic organiza-  
tion in Eastern Seaboard city. Some avia-  
tion experience necessary. Box No. 609,  
AMERICAN AVIATION, 1317 F St., N. W.,  
Washington 4, D. C.

Radio-experienced aircraft radio me-  
chanics wanted by airline operating in  
northeast section of the country. Write  
Box No. 606, AMERICAN AVIATION, 1317 F  
St., N. W., Washington 4, D. C.

WANTED—C-54 or DC-3 Passenger Lease,  
charter or buy State condition. Box No. 610,  
AMERICAN AVIATION, 1317 F St., N.W.,  
Washington 4, D. C.

### AWA Roster Available

The 1948 roster of the Aviation Writers  
Association is available in individual  
copies at the AWA office, 1090 National  
Press Bldg., Washington 4, D. C. The  
booklet lists the names, business con-  
nections and addresses of 340 members.

A 66-page, illustrated catalog of all stand-  
ard makes of industrial instruments and  
controls can now be obtained from Electro-  
Tech Equipment Co., 117 Lafayette St., New  
York 13, N. Y. In addition to illustrations,  
the booklet gives complete specifications.

WORLD-WIDE distributors of multi-engine transport type aircraft,  
engines, their components and accessories. Agent for WAR ASSETS  
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Branch Warehouse: Oakland Municipal Airport, Oakland, Calif.  
Agents for Frank Ambrose Aviation (Canada) Ltd., Dorval Airport, Montreal, Canada  
and Frank Ambrose Aviation, S. A. Panama City, R. P.  
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## LETTERS

### Likes 'New Look'

To the Editor:

"The New Look" AMERICAN AVIATION sports with the March 15 issue is mucho bueno. Add my congratulations to the flock of others you will receive.

MEL ADAMS  
New York City

### Wants News, Less Views

To the Editor:

I subscribed to your magazine because it advertises itself as "The News Magazine of Air Transportation." So, let's stick to the news and a few less views . . .

If we have to have editorials let's change the key for just one issue and pick a non-controversial subject like, "A Debate—Are the Senior Pilots Getting Healthier and the Stewardesses Uglier."

CAPT. T. P. McMANUS  
Seattle, Wash.

### Industry Study Needed

To the Editor:

Since the first of the year the President's Air Policy Commission and the Joint Congressional Aviation Policy Board have made reports and recommendations with respect to the air transport industry. I believe that both reports have made substantial recommendations with respect to the manufacturing industry that will have a wholesome effect on the future well-being of the aircraft companies and the national security. Perhaps, however, the suggestion I make with respect to the air transport industry might

apply with some force also to the aircraft manufacturing industry.

Neither report has made any contribution to air transportation except to point out the obvious things that are well known to everyone including the Civil Aeronautics Board to whom the recommendations were essentially directed.

It is unfortunate that the air transport industry has not presented to the Civil Aeronautics Board and to the Congress a purely objective report that would point out the ills of the industry and the cure. No one knows better than the executives interested in air transportation those things that are necessary to restore the air transport industry to a position of public confidence and good will; to operate on a more efficient basis and thus reduce subsidies; to lower fares; to restore profits; and to be in a position to fulfill its statutory obligation of maximum aid to the national defense.

My suggestion, therefore, is that a representative group of those interested in air transportation be appointed from within the industry to make a complete study and recommendations, objective in character, as to the method by which the foregoing would be accomplished so that the air transport industry will operate at maximum efficiency at this time of distress and fear throughout the world.

There are sufficient men of high calibre and standing in the industry who, if they applied themselves to it, without consideration of own company connections would make a completely objective study, report and recommendations which would be of inestimable value to the industry and to our country.

It is unfortunate that the Civil Aeronautics Board has not undertaken such a study and report and then to have proposed a plan to implement it. In the absence of the leadership by the Board it must be taken by someone. I suggest members of the air transport industry. It could be done within a matter of several weeks by the proper persons.

S. J. SOLOMON,  
Washington, D. C.

### 12th Instead of 17th

To the Editor:

We feel that Philadelphia has been very much discriminated against by the CAB and others, but we think it most unfair that your splendid magazine (March 15, page 33) should portray Philadelphia as 17th in air carrier operations for 1947. Your footnote explains that the total represents operations at the Southwest Airport for the last nine months of the year. This is due to the fact, we presume, that the CAA took over the operation of the control tower the first of April, and have reported only for the last nine months. However, our control tower reports were filed with the CAA for the first three months of 1947 also.

With the records that the CAA have furnished, plus our figures, the total air carrier operations for the year amount to 56,288:

January 1947	3,278
February	3,454
March	4,444
CAA figures (9 months)	45,112
	56,288

This would place us 12th on your list and actually ahead of our good friends in the City of Boston.

We know Philadelphia's shortcomings in aviation, and are doing everything we can to rectify them, and we feel there is no excuse for the lack of airline service here. However, we would like, if possible, to have you show us in our true relation to the 25 leading airports in the United States.

J. VICTOR DALLIN,  
Chief, Bureau of Aeronautics,  
Philadelphia, Pa.

(Aligning with CAB in discrimination against Philadelphia was all a mistake. We accept the correction and are happy to boost the Quaker City from the 17th to the 12th spot in volume of air carrier operations during 1947.—The Editors.)

## WINGS OF YESTERDAY

### 25 Years Ago

The air services of the Army, Navy and Post Office Dept. were made available to the American Red Cross in its disaster relief operations.

The Sikorsky Aero Engineering Corp. was chartered Mar. 5, 1923, by the Secretary of State of New York, with capitalization of \$200,000.

One of the outstanding aeronautical achievements of 1922 was development, by Lawrence Aero-Engine Corp. of New York, of the first satisfactory American radial air-cooled engine, the Model J1.

### 10 Years Ago

(IN AMERICAN AVIATION)

With all government departments and virtually all aviation interests in agreement over basic principles for an independent civil aviation commission or authority, administration forces in Washington were confident the week of Mar. 27, 1938, that enabling legislation would be enacted before end of the 75th Congress.

The 1939 Treasury and Post Office appropriation bill (H.R. 8947) providing \$16,650,000 for contract domestic air mail was passed by Congress.

On Mar. 11, 1938, Robert J. Smith was appointed a vice president of Braniff Airways, succeeding O. M. Mosier.

## OBITUARY

### John H. Lancaster

John H. Lancaster, of Birmingham, Mich., formerly a member of public relations department of the Glenn L. Martin Co., died in Baltimore Mar. 10 after a fall from a downtown office building. He was at one time a member of the editorial staff of *Flying Magazine* and recently had been public relations director of Stinson Division, Consolidated Vultee Aircraft Corp.

### Adm. Joseph Reeves

Adm. Joseph Mason Reeves, former commander-in-chief of the U. S. fleet, died Mar. 25 at Bethesda Naval hospital. He was 75. Reeves was a pioneer in Naval aviation.

AMERICAN AVIATION

# DINKLER HOTELS

## TOPS

EACH ONE  
IN THESE EIGHT, GREAT  
SOUTHERN CITIES

in Atlanta • THE ANSLEY  
*Joe Crocy, Manager*

in Birmingham • THE TUTWILER  
*Ira Patton, Manager*

in Montgomery • THE JEFFERSON DAVIS  
*Homer Spiva, Manager*

in Nashville • THE ANDREW JACKSON  
*Len Murrell, Manager*

in New Orleans • THE ST. CHARLES  
*J. J. (Mike) O'Leary, Vice Pres. & Mgr.*

in Savannah • THE SAVANNAH  
*George Fowler, Manager*

in Louisville • THE KENTUCKY  
*James E. Rushin, Manager*

in Greensboro • THE O. HENRY  
*Leon Wamble, Manager*

•

Carling Dinkler,  
President



**THE** amplifier on Honeywell's Turbo Supercharger is a typical example of how important improvements grow out of simplification that's backed by sound, practical engineering.

Focusing attention on every important detail, Honeywell Creative Engineering discarded the traditional louvered amplifier case. The transformer and Resistor-Condenser components are hermetically sealed and shielded with metal spray. These and other heat generating units are mounted in separate enclosures outside the chassis. Result: better heat dissipation, more protection from dust and dirt, less radio interference and greater resistance to humidity and temperature extremes.

Here again, as with the Honeywell electronic Fuel Gage and Autopilot, is an instance where Creative Engineering brings benefits that can be recognized—benefits that pay out through greater dependability, lower operating costs, less maintenance. Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Toronto 12, Ontario.



Simple in appearance—just as simple to service. A twist of the wrist removes tube housing. Wiring and connections underneath the chassis are completely accessible in a matter of seconds.



CREATIVE ENGINEERING

MINNEAPOLIS  
**Honeywell**

AERONAUTICAL CONTROLS

# 22 YEARS OF CONTINUOUS SERVICE



These pictures span 22 years of Western Air Lines' progress . . . from its first, 400-hp., single-seater biplane to the 40-passenger, 4800-hp. Convair-Liner, soon to go into operation. The Convair-Liner is the first conventional transport designed to use exhaust gases for additional "thrust." Its cruising speed of about 300 mph. will be important in Western Air's plans for faster passenger, mail and freight schedules.

## Western Air Lines uses **Texaco Aircraft Engine Oil** exclusively on all its aircraft

**W**ESTERN AIR LINES, America's Pioneer Airline, rounds out twenty-two years of growth and service on April 17th. Texaco is happy to take this occasion to salute Western Air Lines for its long record of progress and achievement.

In 1926, its first year of operation, Western Air Lines carried a total of 209 passengers. Now, more than 500,000 passengers annually fly in its planes . . . enjoy and profit by its hearty western hospitality, courtesy and efficiency.

Western Air Lines uses *Texaco Aircraft Engine Oil* exclusively on all its aircraft. So do other lead-

ing airlines. In fact —

*More revenue airline miles in the U. S. are flown with Texaco Aircraft Engine Oil than with any other brand.*

And Texaco Lubrication Engineering Service is famous wherever airlines operate. You can get this service, and the complete line of Texaco Aviation Lubricants and Fuels, from the nearest of the more than 2500 Texaco Distributing Plants in the 48 States. The Texas Company, *Aviation Division*, 135 East 42nd Street, New York 17, N. Y.



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TUNE IN . . . TEXACO STAR THEATER every Wednesday night featuring Gordon MacRae, Alan Young, Evelyn Knight: ABC Network.